### Lenovo Group Limited | 2015/16 Sustainability Report

Stock Code 992

# BEING BEING BETTER

Lenovo has a strong obligation to uphold global standards of corporate citizenship. Sustainability has been a part of our corporate culture since the start, and as we continue to grow, so does our commitment to improving our efforts. This year, we doubled down by taking action to raise our carbon emissions reduction target from 20 percent to 40 percent by 2020 relative to our FY 2009/10 baseline, aligning with the latest scientific findings on climate change. As a global company, we are deeply committed to these initiatives and plan to continue leading the way in building a more sustainable future. Because by being more sustainable, we can all be better.

LENOVO'S AIM IS ALWAYS SET ON BEING BETTER

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## 0.0 REPORT PARAMETERS

This is Lenovo's tenth annual sustainability report. It covers the Fiscal Year 2015/16 (April 1, 2015 through March 31, 2016). The most recent report prior to this was published in January 2016 for the Fiscal Year 2014/15. This and previous reports are available at: www.lenovo.com/sustainability.

This report is considered a companion document to Lenovo's annual and interim reports. Those can be viewed at: <u>www.lenovo.com/</u> <u>ww/lenovo/annual\_interim\_report.html</u>. The <u>FY 2015/16 Annual Report</u> contains a CSR/sustainability overview on pages 117-136.

### SCOPE OF THE REPORT

- All references, unless otherwise noted, are to Lenovo's fiscal year, which ends March 31, unless otherwise stated.
- This report covers Lenovo's global operations including previously reported joint ventures and acquisitions, except where noted.
  Motorola Mobility is not covered in this report except where noted.
- Our operations:
  - Primary operational hubs in Beijing, China; Singapore, Republic of Singapore; and Morrisville, North Carolina, USA
  - » Major research centers in Yokohama, Japan; Beijing, Shanghai, Xiamen, Chengdu and Shenzhen, China; Essen, Germany; and Morrisville, North Carolina, USA
  - » Manufacturing and assembly facilities in Beijing, Chengdu, Shanghai, Huiyang, Shenzhen, Wuhan, Hefei and Xiamen, China; Pondicherry, India; Monterrey, Mexico; Manaus and Itu, Brazil; Gunma and Yonezawa, Japan; and Greensboro, North Carolina, USA
  - » Call centers in North America, South America, Europe, Asia and Australia

### **REPORT CONTENT**

The content of this report is informed by the Global Reporting Initiative (GRI) G4.0 Sustainability Reporting Guidelines, the Environmental, Social and Governance (ESG) Reporting Guide of the Hong Kong Stock Exchange, and the needs of Lenovo's stakeholders. Lenovo has complied with all "comply or explain" provisions as set out in the ESG Guide throughout the year ended March 31, 2016. Lenovo's sustainability stakeholders are discussed in the Materiality and Stakeholder Engagement section on pages 14-15.

#### NOTES

Notes in the Consolidated Metrics, FY 2015-16 Performance, and FY 2016-17 Objectives and Targets sections apply to all places throughout the document where that data is used.

### **EXTERNAL ASSURANCE**

Bureau Veritas provided verification services for the following:

- All Greenhouse Gas (GHG) emissions data in this report
- Waste and water data in this report
- Certification for our compliance to ISO 9001, ISO 14001 and OHSAS 18001

Certificates for the above can be seen on our website.

### **BASIS OF CALCULATIONS**

- All financial data is denoted in U.S. dollars.
- Lenovo may in some instances face various challenges when measuring its performance. If there are contingencies associated with the data provided, those contingencies will be noted in the documentation.
- Lenovo continues to strive for excellence in measuring and improving its performance by adding new indicators. When new indicators are added, it may take time to deliver trending information. Therefore, we may not always provide information publicly until we are certain that this data can be delivered in a high-quality and consistent manner.

## CONTACT INFORMATION FOR THIS REPORT

For questions or other information about this report or its content, please contact:

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### FEEDBACK

We welcome your comments and suggestions about Lenovo's sustainability performance and reporting. Please email Mark Thomsen at <u>environment@lenovo.com</u>.



# EXECUTIVE LETTERS

1.0	EXECUTIVE LETTERS
1.1	A Message from Yang Yuanqing
1.2	A Message from Peter Hortensius



## A MESSAGE FROM YANG YUANQING OUR CHAIRMAN AND CEO

Throughout our history, Lenovo has embraced the opportunity to push boundaries as a global leader in technology innovation. This has enabled us to establish entirely new product categories, expand into exciting new markets, and break the ground on many technology firsts. As we've grown and diversified our business, we have also embraced the opportunity to become a leader in sustainability. The 2015/16 fiscal year was a challenging one, marked by significant change and transformation at our company and across our industry. But one thing that will always remain consistent is our core set of values around corporate social responsibility. We remain steadfast in upholding our sustainable business practices across our diverse portfolio of business groups and instilling a strong culture of corporate social responsibility. I'm proud to say that each of Lenovo's 55,000-plus workforce across the globe takes an active role in being a responsible global corporate citizen. As we grow, we recognize that so must our commitment to the environment, our employees, our customers, our investors, and the local and global communities where we live and operate. In this tenth annual Lenovo Sustainability Report, we have outlined the investments we're making to sustainability and our progress in the following areas:

- Following Lenovo's Executive Committee and Board of Directors' direction, at the beginning of FY 2015/16 we increased our interim reduction targets for Scope 1 and 2 GHG emissions officially from 20 percent to 40 percent by 2020 relative to our FY 2009/10 baseline. This second-generation target for GHG emission reductions aligns with our customers' and investors' expectations and follows the latest scientific findings of climate science.
- Lenovo achieved a CDP 2015 disclosure score of 100 (out of a possible 100), which assessed the quality and comprehensiveness of Lenovo's carbon reporting. In addition, CDP placed Lenovo in the performance band B (out of the following bands: A, A-, B, C, D and E), which evaluated Lenovo's actions on combating climate change such as climate change mitigation, adaptation and transparency. Lenovo received a Corporate Sustainability Award at the CDP China Report launch event in Beijing in November, 2015.
- Lenovo committed to action on climate change as a signatory of the We Mean Business initiative, a coalition of businesses and investors supporting a transition to a low carbon economy.
- Also, Lenovo signed the American Business Act on Climate Pledge, joining a White House initiative led by U.S. President Barack Obama and an initial group that consisted of more than 60 companies supporting global climate change actions at the COP21 climate change agreement in Paris.

- Lenovo was selected as a constituent stock of the 2015 Hang Seng Corporate Sustainability Index, the sixth year in a row Lenovo was named to this important list.
- Lenovo's continuing role since 2009 as member and signatory of the United Nations Global Compact and the alignment of our operations and strategies with its policies and principles in the areas of human rights, labor, environment and anti-corruption.

We have a strong, profitable foundation, a bustling innovation pipeline, and crystal clear vision for our future. I'm confident that we are positioned for continued success – both as a global technology leader and a leader in building a more sustainable future. Our aim is always set on being better, and we will not lose sight of our goals.

Thank you,

Yang Yuanqing Chairman and Chief Executive Officer, Lenovo



## A MESSAGE FROM PETER HORTENSIUS OUR CHIEF SUSTAINABILITY EXECUTIVE

This past year brought significant achievements but also challenges for Lenovo. As we review our sustainability targets and environmental compliance, we realize we can always do better, and that by addressing these challenges, we will come out stronger as a result. As Lenovo's Chief Sustainability Officer, I lead our efforts for sustainable practices and ensure our business upholds our commitments to the environment. This is something that we factor into the decisions made across our business each and every day.

This year, Lenovo made great strides in its ongoing sustainability efforts. The company signed the American Business Act on Climate Pledge to support global climate change actions and the conclusion of a climate change agreement in Paris. Our signing of the pledge reconfirmed our commitment to reducing our global carbon footprint, and specifically outlined the following actions:

- Reduce our global Scope 1 and 2 GHG emissions by 40 percent by 2020, compared to a 2009 baseline.
- Grow our renewable energy portfolio by annually increasing the percentage of energy purchased from renewable generation sources globally, relative to the previous fiscal year.

 Drive reductions in our products' energy use by showing improvements in energy efficiency relative to the previous generation of the product.

As the company has grown, so too have the resources and attention we've dedicated toward ensuring all parts of the business are held to the same environmental standards, including the employees, business units and facilities joining Lenovo through recent acquisitions. Over the past year, we continued to integrate and align under the Lenovo Global Environmental Management System, and Lenovo's Global Supply Chain Sustainability team led efforts to integrate the acquired System x and Motorola Mobility supply chain sustainability programs into our own. With the synergies in operations and the ability to consolidate plants and centralize supply chain and manufacturing activity, we will be able to significantly reduce the carbon footprint of these companies.

There is no doubt we have an increased responsibility to protect the environment and lead in product quality, safe workplace practices, and ethical standards across our company and global supply chain. Throughout FY 2015/16, we continued to demonstrate sustainability and social leadership with the following programs:

- As a long-standing member of the Electronics Industry Citizenship Coalition (EICC), Lenovo contributes to and fully supports their development and execution of global policies and programs that improve supplier compliance across a broad range of sustainability and social responsibility criteria. Lenovo is committed to EICC's Code of Conduct and we apply it externally to our supply chain and internally to our global manufacturing locations. We implement the EICC Code of Conduct through supplier contracts, self-assessments and audits, and strive to directly validate 95 percent of our suppliers by spending.
- Lenovo made significant progress in FY 2015/16 with our conflict minerals program.
  Ninety-five percent of our suppliers have conflict minerals policies and use industry

tools for reporting and due diligence. This has helped us to improve our conflict-free status of all valid smelters from 68 to 75 percent. We also achieved 100 percent conflict-free status on tantalum.

- We implemented new energy efficiency projects worldwide, including implementation of ISO 50001 Energy Management System in all our European Union locations.
- We purchased renewable energy commodities to support solar, wind and hydro projects in China, USA and Europe.

Lenovo is a truly global technology leader – a \$45 billion Fortune 500 company with more than half of our business outside of China. And our continued growth only increases our commitment to sustainable operating standards that are in line with our long-held values of global citizenship. As we move forward, we will continue to challenge ourselves by setting and meeting new goals for reducing our carbon footprint and improving our overall sustainability progress. Because being sustainable means we can all be better.

To close out, it is my pleasure to announce that Guan Wei, vice president of Global Operations, will be taking my place as Lenovo's Chief Sustainability Executive starting in the new fiscal year as I assume a new role as CTO and strategy lead for our Data Center Group. It has been an honor to have served the company, our investors and our consumers in this role, and I look forward to watching Guan continue to build upon Lenovo's commitments to sustainability.

Thank you,

**Peter Hortensius** Chief Sustainability Executive Chief Technology Officer, Data Center Group Senior Vice President, Lenovo



# INTEGRATING SUSTAINABILITY

2.0	INTEGRATING SUSTAINABILITY
2.1	Materiality and Stakeholder Engagement
2.2	FY 2015/16 Consolidated Metrics
2.3	FY 2015/16 Performance
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TEGRATING SUSTAINABILITY

## 2.1 MATERIALITY AND STAKEHOLDER ENGAGEMENT

### MATERIALITY

Lenovo's integration of sustainability impact concerns into its strategy, planning, implementation and reporting activities begins with an assessment of materiality. We believe proper identification of sustainability-related material concerns is integral to achieving our business goals of minimizing risk and maximizing growth and returns on capital, along with fulfilling our commitment to outstanding corporate citizenship.

Internally, Lenovo regularly conducts assessments to identify and categorize all material concerns, including sustainability-related issues. Lenovo's environmental management system, for example, provides regularly scheduled audits, measurement of key performance indicators and continuous improvement. The benefits of this system include monitoring our progress on previously identified material concerns and more quickly spotting emerging issues.

The scope of this Sustainability Report and our GRI G4 Index (<u>www.lenovo.com/GRI-index</u>) was was determined by our Sustainability Materiality Assessment, a process where we evaluate and determine Lenovo's significant, or material, environmental and social responsibility aspects.

Lenovo acknowledges that a variety of external perspectives are relevant to identifying material issues. We regularly engage with a variety of stakeholders and consider their feedback as we affirm what is material to our business, develop our sustainability strategy and report on our progress.

### STAKEHOLDER ENGAGEMENT

Lenovo continued to actively manage its relationships in FY 2015/16 with employees, customers, suppliers, investors, regulators, members of the communities in which we operate, industry groups, non-government organizations (NGO) and other stakeholders whose actions can affect the company's performance and value.

Mechanisms for engaging with stakeholders on sustainability issues include:

- Issuing communications on company sustainability performance (such as this report) for employees, customers, investors and other interested stakeholders (see the <u>Communication with Shareholders and</u> <u>Investor Relations</u> section).
- Employee/management meetings and communications for employee performance management.
- Employee surveys such as the "Lenovo Listens" survey, commuting surveys and others.
- Customer surveys and direct customer interaction.
- Supplier conferences and quarterly business reviews.
- Ongoing interactions and initiatives with local communities.

- Responding to investor analyst and NGO surveys and inquiries.
- Meetings and communications with industry peers, regulators and standards organizations to address issues of industry importance.

Stakeholder engagement manifests itself in different ways for different purposes. Lenovo often uses stakeholder engagement as a component of the performance improvement process. For example, at Lenovo employee service centers we deploy a survey after a case is closed. This survey provides us with immediate feedback on our performance and allows us to make adjustments quickly with the goal of improving service delivery.

The results of the Sustainability Materiality Assessment previously mentioned also guide us in evaluating and prioritizing stakeholder inputs. Our environmental, quality and other management systems have defined processes for obtaining and analyzing stakeholder input to help improve our performance as well as manage risk.

Lenovo's network of geographic, environmental and sustainability focal points engage with local sales teams and customers on a regular basis. This is done through detailed responses to customer questions and meetings at customer locations or at Lenovo's briefing centers. These meetings allow Lenovo to get direct feedback on our environmental programs. Examples of feedback include information on eco-label preferences, requests for packaging optimization, and requests for further information for internal customer education.

We are also heavily engaged with our suppliers to drive enhanced transparency and compliance and reporting tools such as Lenovo's full materials disclosure declarations and EICC reporting requirements. This is done via regular interactions with our suppliers, including communications, regular reviews and report cards. Local stakeholder engagement at the site level is primarily done through Lenovo's community relations (see the <u>Community Outreach</u>, <u>Collaborations and Partnerships</u> section) and communications teams, who work closely with Lenovo's global organization on sustainability issues.

Key sustainability issues addressed through Lenovo's engagement with stakeholders in the past fiscal year include human rights, climate change, carbon disclosure, packaging, energy efficiency, recycling, and the use of environmentally preferable materials. Lenovo has responded to these concerns by:

- Implementing a <u>Supplier Code of Conduct</u>.
- Enhancing our climate change commitments and renewable energy portfolio.
- Reporting carbon emissions data and strategies to CDP (formerly Carbon Disclosure Project) (see the <u>Environmental Impact of</u> <u>Lenovo Operations</u> section). In 2015, Lenovo achieved a disclosure score of 100 and a performance score of band B.
- Supporting the development of standardized tools to calculate a product's carbon footprint.
- Calculating the water footprint of select desktop products.
- Providing free consumer recycling options in many geographies (see the <u>Recovery and</u> <u>Recycling Trends</u> section).
- Continuing the use of post-consumer recycled content (see the <u>Product Life Cycle</u> <u>Management</u> section).

# 2.2 FY 2015/16 CONSOLIDATED METRICS

General Data					
	FY 2011/12	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16
Revenue (Millions USD)	\$29,574	\$33,873	\$38,707	\$46,296	\$44,912
Revenue Analysis by Geography	FY 2011/12	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16
Mature Markets	42%	-	-	_	-
Americas	—	19%	21%	26%	30%
EMEA (Europe, Middle East, Africa)	-	22%	25%	28%	26%
Emerging Markets (excluding China)	16%	_	_	_	-
Asia Pacific (excluding China)	—	16%	16%	14%	16%
China	42%	43%	38%	32%	28%
Revenue Analysis by Business Group	FY 2011/12	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16
PC	90%	84%	82%	72%	66%
Mobile	5%	9%	14%	20%	22%
Enterprise	—	-	1%	6%	10%
Others	5%	7%	3%	2%	2%
Research and Development	FY 2011/12	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16
Expenditures/Sales	1.53%	1.84%	1.89%	2.64%	3.32%

### Employees, Health and Safety

	FY 2011/12	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16
Number of Employees - Total <sup>2</sup>	27,897	35,026	54,372	50,348	48,975
Number of Employees by Region <sup>1</sup>	FY 2011/12	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16
Americas	12%	-	23%	25%	15%
North America	_	7%	-	_	-
Asia Pacific (excluding China)	10%	-	7%	8%	8%
Asia Pacific/Latin America (excluding China)	_	21%	_	_	-
China	68%	63%	63%	59%	69%
EMEA (Europe, Middle East, Africa)	10%	8%	7%	8%	8%
Percentage of Employees by Gender					
Males		61%	60%	64%	66%
Females		39%	40%	36%	34%
	CY 2011	CY 2012	CY 2013	CY 2014	CY 2015
Hours of training per manufacturing employee (including part-time employees)	35	35	35	35	35
Incident Rates	CY 2011	CY 2012	CY 2013	CY 2014	CY 2015
Recordable Rate	0.30	0.21	0.19	0.13	0.10
Lost-Time Rate	2.40	2.96	2.27	2.20	2.69
Number of employee fatalities (work-related)	0	0	0	0	0
Number of contractor fatalities (work-related)	0	0	0	0	0
	CY 2011	CY 2012	CY 2013	CY 2014	CY 2015
Number of OHSAS 18001 registered facilities	8	9	9	10	10

### **Communities and Philanthropy**

	FY 2011/12	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16
Cash Donations					
Corporate and Rest of World	\$1,655,000	\$100,000	\$417,500	\$590,000	\$404,000
China	\$76,454	\$533,991	\$358,000	\$176,000	\$311,000
North America	\$641,549	\$211,742	\$156,500	\$411,450	\$692,000
Lenovo Match of North America Employee Donations	\$181,000	\$215,000	\$214,988	\$259,431	\$281,778
EMEA (Europe, Middle East, Africa) <sup>3</sup>	—	-	-	\$105,000	\$169,000
Asia Pacific (excluding China) <sup>3</sup>	-	-	-	\$10,880	\$82,000
Product and Other In-Kind Donations					
Corporate and Rest of World	\$925,000	\$50,000	\$262,086	_	\$319,000
China	\$65,000	\$216,823	\$542,000	\$113,000	\$100,000
North America	\$69,172	\$241,367	\$366,409	\$280,766	\$388,000
EMEA (Europe, Middle East, Africa) <sup>4</sup>	_	-	_	\$60,000	\$36,000
Asia Pacific (excluding China) <sup>4</sup>	-	-	-	\$155,928	\$140,000
Employee Giving (through efforts sponsored by Lenovo)					
All	\$440,325	\$506,587	\$510,994	\$575,941	\$698,160
Employee Volunteering Hours (through efforts sponsored by Lenovo)					
China	3,200	>5,000	>5,000	>5,000	>5,000
North America	1,500	4,000	7,500	16,000	19,000

### **Environmental Data**

	FY 2011/12	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16
GHG Emissions⁵ (Metric Tons CO, equivalent - MT CO,e)					
Scope 1	13,849	11,591	13,507	8,996	7,068
Scope 2 (location-based)	301,746	297,238	244,372	221,406	228,493
Total Scope 1 & Scope 2 (location-based)	315,595	308,829	257,879	230,402	235,561
Scope 2 (market-based)	301,746	297,238	244,372	221,406	203,041
Scope 3	FY 2011/12	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16
Business Travel	31,588	24,793	26,844	34,600	39,000
Product Transportation	387,250	267,530	316,594	293,102	326,840
Emissions from Waste	524	870	1,058	2,138	2,149
Employee Commuting	22,219	23,196	24,720	30,700	26,300
Purchased Goods and Services	N/A	1,270,866	1,117,052	1,054,683	1,646,141
Fuel-and-Energy Related Activities (not included in Scope 1 or 2)	N/A	7,134	8,936	10,737	14,664
Use of Sold Products	N/A	N/A	14,300,000	12,800,000	12,000,000
End-of-Life Treatment of Sold Products	N/A	N/A	400,000	300,000	290,000
Capital Goods	N/A	N/A	N/A	37,700	227,700
Emissions Intensity: GHG Emissions - Scope 1 & Scope 2 (location-based) <sup>5</sup> (Metric Tons per \$ million revenue)	FY 2011/12	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16
	10.67	9.12	6.66	4.98	5.24
Operational Energy Intensity Use - Scope 1 & Scope 2 (location-based)⁵ (MWh per \$ million revenue)	FY 2011/12	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16
Fuel Combustion	0.50	0.51	0.54	0.72	0.74
Purchased Energy (electricity and steam)	4.05	3.67	4.14	4.66	6.97
Operational Energy Use - Scope 1 & Scope 2 (location-based)⁵ (MWh)	FY 2011/12	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16
Fuel Combustion	14,900.80	17,309.71	20,953.29	33,201.65	33,363.16
Purchased Energy (electricity and steam)	119,685.48	124,275.67	160,298.07	215,753.86	313,027.41
Voluntary Purchases of Renewable Energy⁵	FY 2011/12	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16
Solar Energy	_	210	332	201	221
Renewable Energy Credits	10,500	35,303	12,621	15,000	26,400
Renewable Energy Guarantees of Origin	N/A	N/A	N/A	10	4,500
Carbon Offsets	3,000	9,457	45,765	80,000	54,000
Water <sup>6</sup> (in Cubic Meters)	FY 2011/12	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16
Water Use	508,935	602,155	874,742	1,202,689	1,366,829
Wastewater Discharge Values	484,072	549,678	811,807	1,127,164	1,298,427
Wastewater Exceedances	0	0	0	0	0

### **Environmental Data**

	FY 2011/12	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16
<b>Waste<sup>7</sup></b> (in Metric Tons)	FY 2011/12	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16
Nonhazardous Waste	16,764.67	20,088.68	27,316.95	35,944.75	40,041.55
<u>Hazardous Waste</u>	11.24	12.66	26.57	210.29	78.90
<b>Recovery and Recycling Trends</b> (in Metric Tons)	CY 2011	CY 2012	CY 2013	CY 2014	CY 2015
Product End-of-Life Management (PELM) <sup>8</sup>	13,664.74	11,126.50	12,806.00	14,587.00	18,600
Product Take Back (PTB) <sup>8</sup>	12,743.25	9,876.70	10,578.00	11,252.00	15,487
<u>Product End-of-Life Management</u> (PELM) Disposition (in Metric Tons)	CY 2011	CY 2012	CY 2013	CY 2014	CY 2015
Reused	899	1,094	1,239	788	778
Recycled	11,587	9,352	11,130	13,209	14,620
Waste-to-Energy (WTE)	817	351	264	251	507
Incinerate	88	29	46	78	804
Landfill	273	302	127	256	1,891
Total	13,665	11,128	12,806	14,587	18,600
Product Take-Back (PTB) Disposition (in Metric Tons)	CY 2011	CY 2012	CY 2013	CY 2014	CY 2015
Reused	388	238	266	534	375
Recycled	11,273	9,007	9,895	10,205	14,128
Waste-to-Energy (WTE)	811	350	261	251	502
Incinerated	82	29	45	78	134
Landfill	189	254	111	184	348
Total	12,743	9,878	10,578	11,252	15,487
Product Take Back (PTB) by Geography (in Metric Tons)	CY 2011	CY 2012	CY 2013	CY 2014	CY 2015
EMEA (Europe, Middle East, Africa)	9,424	7,619	6,056	6,732	9,909
The Americas	2,112	1,110	1,556	1,999	4,657
Asia Pacific (excluding China)	1,208	1,148	2,966	2,521	910
Total	12,743	9,877	10,578	11,252	15,476
<u>Use of Recycled Plastics in Products</u> (in Pounds)	CY 2011	CY 2012	CY 2013	CY 2014	CY 2015
Plastics Containing Recycled Content (PCRC)	23,949,989	24,759,119	22,988,393	23,850,027	20,597,606
Net Post Consumer Recycled Content (PCC)	10,508,749	12,165,750	11,338,718	13,883,806	11,622,364
Net Post Industrial Recycled Content (PIC)	117,892	15,013	8,818	18,739	6,724

#### **Environmental Data**

	FY 2011/12	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16
Number of ISO 14001 Registered Sites	FY 2011/12	FY 2012/13	FY 2013/14	FY 2014/15	FY 2015/16
	17	18	24	25	24
ENERGY STAR <sup>®</sup> Certified Products Availability (% of product)					
Notebook Platforms	98	98	100	98	100
Desktop Platforms	71	71	73	82	90
Workstation Platforms	92	92	73	71	76
Server Platforms	50	50	83	94	92
Monitors	96	96	97	97	97

#### **Data Footnotes**

1. Lenovo changed its management of geographies in FY 2012/13.

- 2. Number of Employees Total includes Lenovo employees (regulars and supplementals) only. Contractors are not included as they are not Lenovo employees.
- 3. FY 2010/11 to FY 2013/14 EMEA and Asia Pacific cash donations are included with "Corporate and Rest of World."
- 4. FY 2010/11 to FY 2013/14 EMEA and Asia Pacific in-kind donations are included with "Corporate and Rest of World."
- 5. Lenovo's GHG Emissions and Energy Inventory Specifics:

Lenovo started to verify energy and GHG emissions data in FY 2009/2010.

At the end of FY 2012/13 Lenovo adjusted its historical Scope 1 and 2  $CO_2e$  emissions data to account for acquiring Medion in Germany and creating a joint venture with NEC in Japan. At the end of FY 2015/16 Lenovo adjusted historical Scope 1 and 2  $CO_2e$  emissions data to account for acquiring System X and Motorola Mobility.

Lenovo started to report location-based and market-based Scope 2 from FY 2015/16. Base and consecutive year Scope 2 totals are the same for both the location-based and market-based methods, as product and supplier-specific market-based data were not available in the base year and consecutive years. The location-based results thus have been used as a proxy for the market-based method.

Beginning in FY 2015/16, System x and Motorola Mobility data are included in energy and Scope 3 emissions data. Approximately 5% of purchased energy (electricity and steam) is estimated based upon energy use at similar Lenovo facilities with metered usage.

Product transportation emissions include key downstream suppliers representing a majority of global logistics spend. Emissions from waste include nonhazardous waste, hazardous waste and wastewater from all manufacturing, R&D locations and some large offices. No product waste is included.

Purchased goods and services include suppliers covering 95% of direct global suppliers spend. The EICC Carbon and Water Reporting Tool was used for collecting most supplier data. Data was allocated based on revenue.

Fuel-and-energy related activities (not included in Scope 1 or 2) include transmission and distribution (T&D) losses from Lenovo's worldwide purchased electricity and natural gas. A World Bank database and ENERGY STAR\* Performance Rating document were used for determining T&D loss rates.

Lenovo used the current Product Attribute Impact Algorithm (PAIA) notebook, desktop, monitor, tablet and all-in-one tool for calculating the emissions of Lenovo's typical notebook, desktop, monitor, tablet and all-in-one. The calculated results show emissions distribution by different parts and also for use, packaging, transportation and end-of-life treatment categories. The emissions associated with use and end-of-life treatment of sold products were estimated on a "narrow" baseline for the typical notebook, desktop, monitor, tablet and all-in-one multiplied by sold/shipped product volumes.

Emissions from capital goods are based on purchased capital goods in a given year. The 2012 Guidelines to Defra GHG Conversion Factors for Company Reporting, Annex 13 was used for emission factors for different types of capital goods adjusted for inflation and exchange rates.

Solar energy is measured in MWh.

Renewable Energy Credit and Renewable Energy Guarantees of Origin represent 1 MWh and carbon offset represents 1 MT  $CO_2e$ . These are reported and calculated separately and taken into consideration internally when evaluating progress toward emissions targets.

- Water data includes manufacturing, research and development sites and some large offices. Lenovo started to verify waste and water data in FY 2011/12.
  - Beginning in FY 2015/16, System x and Motorola Mobility data are included in water data.
- Waste data includes site waste from manufacturing, research and development sites and some large offices. Waste data includes processes and operations waste; product waste is reported separately. Lenovo started to verify waste and water data in FY 2011/12.

Beginning in FY 2015/16, System x and Motorola Mobility data are included in waste data.

8. Lenovo's Product End-of-Life Management (PELM) includes product take back (PTB) from customers and Lenovo-owned country returns, manufacturing and R&D scrap, and employee equipment from real estate sites.

# 2.3 FY 2015/16 PERFORMANCE

Target Type	Objective	Key Performance Indicator(s)	Target(s)	Status
	Drive reduction in product energy use.	Energy Efficiency	New products must show improvement in energy efficiency <sup>1</sup> relative to the previous generation of the product.	Target met.
			Continue to support external development of PCF methodologies and standards. <sup>2</sup>	Target partially met. Due to resource restrictions MBG was unable to complete planned LCA.
Product energy	Quantify and reduce lifecycle CO <sub>2</sub> e emissions associated with the use of Lenovo	PCF (kg CO <sub>2</sub> e)	Develop format and methodology for publishing PCF on the web. <sup>3</sup> Product BUs will use this format and methodology to begin publishing PCF for all newly released products after July 1, 2015.	Target met.
	products.		Based upon PAIA generated PCF, product BUs will identify a product lifecycle stage GHG "HOT SPOT" <sup>4</sup> for a high volume, mainstream product and develop and implement a plan for reducing GHG emissions in the area.	Target met. Target met.
	Minimize the use	Task completion	Complete submission of Full Materials Declaration (FMD) xmls by using GDX or equivalent tool prior to checkpoint exit review.	Target met.
	of hazardous or potentially hazardous materials (non-restricted); driving the use of environmentally	Use of environmentally friendly materials	Investigate opportunities for use of biobased polymers in products.	Target met, but due to increased costs and technical issues, no opportunity to begin the use of biobased polymers was identified.
Product Materials	sustainable materials. Produ	Product LH Score	All BUs shall improve the generation- to-generation low halogen (LH) score for at least one mainstream high volume product released during FY 2015/16. <sup>5</sup>	Target met.
	All products across all business units shall contain some	% products containing PCC	All product BUs shall use PCC in every product. <sup>6, 7</sup>	Target partially met. Some Lenovo accessory, server and mobile products do not contain PCC.
	post-consumer recycled content (PCC).	% PCC in product	Maintain or increase current percent PCC <sup>8</sup> usage levels in the next generation of existing products.	Target met.

Target Type	Objective	Key Performance Indicator(s)	Target(s)	Status
		% packaging FSC (Forest Stewardship Council) certified	Maintain 100% FSC or equivalent certification for all virgin fiber used for packaging for all product brands.	Target met.
		% PCC in packaging material	All BUs to ramp up the implementation ratio of 100% PCC (10% increase by shipping volume).	Target met.
Packaging	Minimize packaging material consumption while driving	Use of recyclable packaging materials	Enhance packaging recyclability and encourage the more easily recyclable materials, especially those that can be recycled in municipal waste streams. <sup>9</sup>	Target partially met. Due to product quality assurance issues, Lenovo has been unable to completely eliminate the use of EPS for shipping of monitors.
Fackaging	the use of environmentally sustainable materials.	Product weight/volume	All BUs to target at least one new product (mainstream) to make at least 5% reduction in volume or weight.	Target met.     r     n   Target met.     Target partially met.     Due to product     e   quality assurance     issues, Lenovo has     been unable to     completely eliminate     the use of EPS for     shipping of monitors.     Target met.     t
		Use of biodegradable material	Identify one new product for which to implement use of 100% biodegradable packaging.	Due to cost impacts Lenovo servers and desktops were unable to meet this
		# of labels	All Windows 10 preload systems will implement Rainbow, which includes enhanced power settings application and electronic ENERGY STAR <sup>®</sup> label. <sup>10</sup> Target implementation date is July 2015.	Target met.
Waste management	Minimize environmental impacts associated with solid waste generated from Lenovo operations and	Waste intensity	Achieve a global waste intensity" that is less than or equal to FY 2014/15 waste intensity.	Waste intensity increased from 0.58 to 0.67 kg/unit produced. The increase in intensity is attributed to year-to-year total production remaining flat while total waste generated increased. The increase in total waste is driven by the acquisition of Motorola Mobility
	products.	% nonhazardous solid waste recycled	Achieve a global nonhazardous waste recycling rate that is greater than 90%. <sup>12</sup>	Although we did not meet our 90% goal,
				the annual waste recycling rate did increase slightly from 86.7% to 87.2% year on year.

Target Type	Objective	Key Performance Indicator(s)	Target(s)	Status
Site energy consumption	Maximize energy efficiency and minimize CO <sub>2</sub> e emissions associated with the development, manufacture and delivery of Lenovo products.	kWh/unit produced	Achieve a global energy intensity <sup>13</sup> that is less than or equal to FY 2014/15 energy intensity.	Target not met. Energy intensity increased from 3.24 to 4.83 kwh/unit produced. The increase in intensity is attributed to year-to-year total production remaining flat while total energy consumption increased. The increase in total energy is driven by the acquisition of Motorola Mobility and System x.
		% total energy from renewable sources	Lenovo will achieve a YTY increase in the % of energy purchased from renewable generation sources globally, relative to the previous FY. <sup>14</sup>	Target met.
Site air emissions	Absolute reduction in CO <sub>2</sub> e emissions from Lenovo operations	Metric Tons CO <sub>2</sub> e	Establish a global action plan to reduce combined Scope 1 and Scope 2 GHG emissions by 40% by March 31, 2020, relative to FY 2009/10. The plan will be reviewed and updated annually, at a minimum. <sup>15</sup>	Target met.
	worldwide.		Reduce Lenovo's global GHG emissions by 40% by March 31, 2020, relative to FY 2009/10. <sup>15</sup>	On track.
	Minimize potential environmental impact of Lenovo's Category 1, 2 and 3 suppliers.	% Cat 3 suppliers audited	100% of Category 3 suppliers shall be audited and approved per Lenovo requirements. <sup>16</sup>	Target met.
Supplier environmental performance	Monitor and drive good environmental management practices in the Lenovo Supply Chain.	Task completion	Establish and communicate formal/ quantitative GHG, water and waste reduction goals for Lenovo suppliers prior to FY 2016/17.	Target met.
	Voluntary compliance with the Dodd-Frank	Task completion	Release Lenovo's Specialized Disclosure and Conflict Minerals Report by 5/31/2015. <sup>17</sup>	Target met.
	Act.	Supplier conflict free status	Improve conflict free status by 10% relative to FY 2014/15 by 3/31/2016.	Target met.

Target Type	Objective	Key Performance Indicator(s)	Target(s)	Status
Transportation	Minimize CO <sub>2</sub> e emissions generated from transportation activities associated with the development, manufacture & delivery of Lenovo products. Establish the foundation for driving future reductions in Lenovo international product transport carbon emissions.	% suppliers providing data	100% international air and ocean logistics service providers submitting emissions data. <sup>18</sup>	Target met.
Product end-of-life management	Ensure customer access to convenient, reliable and compliant product take-back programs.	% regional coverage for take-back programs	Maintain current level of global coverage for product take-back programs.	Target met.
		% recycled	Establish baseline recycling rates for recyclers globally.	Target met.
		Task completion	Increase # of Category 3 suppliers that have third-party certification by 4/1/2016. <sup>19</sup>	Target met.

#### **Data Footnotes**

- 1: Each product business unit is responsible for establishing the energy efficiency metric that demonstrates generation-togeneration improvement for its products. Metrics must be established and submitted to Global Environmental Affairs for approval by May 31, 2015. Metrics may be normalized relative to product specifications.
- 2: Actions include:
  - Continued participation in the Product Attribute to Impact Algorithm (PAIA) project.
  - Participation in the CIE (China Institute of Electronics) project to establish a China ICT LCA platform (ePCF database).
  - Mobile Business Group (MBG) shall participate in the development and finishing of a PCF (product carbon footprint) report for at least one selected mobile phone product by using the LCA method by Mar. 31, 2016.
- 3: Global Environmental Affairs is responsible for ensuring development and implementation of web publishing requirements for Lenovo product PCFs.
- 4: HOT SPOT is defined as a stage in the life cycle of the product that generates a large percentage of the product's total life cycle emissions. The specific PCF reduction target will be determined by the BU. The target must be for a mainstream product from generation to generation.
- 5: To support this activity all BUs shall include a requirement for the evaluation of LH components (including raw card PCBs) in new product development. Qualified LH parts available at cost parity shall be used.
- 6: Availability of PCC plastics can be determined through consultation with Global Environmental Affairs or suppliers on the Lenovo Approved PCC Supplier list.
- 7: To drive increased usage of PCC, all BUs shall include a requirement for identifying PCC applications in new product development. PCC shall be used when technical specifications and cost parity are met.
- 8: PCC percentage is calculated using EPEAT methodology (i.e., net amount of post-consumer recycled content as percentage of total weight of plastic in product).
- 9: Special focus should be put on phasing out all use of EPS (expanded polystyrene).
- 10: An electronic ENERGY STAR\* logo will be displayed in this application. The physical ENERGY STAR\* label will be removed from Windows 10 systems.
- 11: Waste intensity will be calculated at the global level as total nonhazardous waste generated per unit of product produced during the fiscal year.
- 12: Percent of nonhazardous solid waste disposed of through reuse, recycle or incineration with energy recovery.
- 13: Energy intensity will be calculated at the global level as total electricity consumed per unit of product produced during the fiscal year.
- 14: This goal may be accomplished through installation of on-site renewable energy generation, entry into power purchase agreements (PPA) with power providers, and /or the purchase of renewable energy credits and carbon offsets.
- 15: These goals may be accomplished through energy efficiency, installation of on-site renewable generation, entry into power purchase agreements (PPA) with power providers, and/or the purchase of renewable energy credits and carbon offsets.
- 16: Audited means Lenovo or third-party on-site supplier facility and processes environmental evaluation has been carried out.
- 17: Lenovo Specialized Disclosure and Conflict Minerals Report will include the recently acquired System x and Motorola Mobility organizations beginning with CY 2016 reporting.
- 18: As of March 2015, Lenovo has a total of eight suppliers globally, and 75% are providing data on a monthly basis. UPS and K&N are missing.
- 19: For example, R2, ISO 14001, etc.

# 2.4 FY 2016/17 OBJECTIVES AND TARGETS

Target Type	Objective	Key Performance Indicator(s)	Target(s)
Packaging and paper <sup>1</sup>	Minimize packaging	% packaging FSC (Forest Stewardship Council) certified	Use 100% FSC or equivalent virgin fiber packaging.
	material consumption while driving the use of environmentally sustainable materials.	% of packaging that is 100% PCC	Increase use of 100% PCC by 10% based upon shipping volume relative to previous year.
	sustainable materials.	Packaging volume/weight	Achieve 5% reduction in weight or volume for at least one product.
Product energy <sup>1</sup>	Drive reduction in	Energy efficiency	New products must show improved energy efficiency relative to the previous generation of the product.
	product energy use.		Ensure select products are compliant with preferred voluntary energy standards.
	Quantify and reduce lifecycle CO <sub>2</sub> e emissions	Task completion	Continue to support external development of PCF methodologies and standards.
	associated with the use of Lenovo products.		Ensure product carbon footprint is published for all new Lenovo products. <sup>2</sup>
Product materials <sup>1</sup>	Sustain technological advances and maintain portfolio relative to low halogen products. Monitor and respond to market requirements in this area.	Product low halogen (LH) score	Maintain or improve generation-to- generation LH score for all products.
	All products across	% products containing PCC	Monitor and prepare to meet customer PCC requirements (e.g., IEEE 680.1).
	all business units shall contain some post-consumer		All product BUs shall use PCC in every product.
	recycled content (PCC) <sup>3, 4</sup> .	% PCC⁵ in each product	Maintain or increase current percent PCC usage levels in the next generation of existing products.

Target Type	Objective	Key Performance Indicator(s)	Target(s)
Site energy consumption	Maximize energy	kWh/unit produced	Maintain global energy intensity at +/- 5% of FY 2015/16 rate. <sup>6</sup>
	efficiency and minimize CO <sub>2</sub> e emissions associated with the development,	Renewable energy generation capacity (MW)	Achieve 30MW of Lenovo owned or leased renewable energy generation capacity globally by 2020.
	manufacture and delivery of Lenovo products.	% total energy from renewable sources	Lenovo will achieve a YTY increase in the % of energy purchased from renewable generation sources globally, relative to the previous FY.
Site air emissions	Absolute reduction in CO <sub>2</sub> e emissions from Lenovo operations worldwide. <sup>7</sup>	Metric Tons CO <sub>2</sub> e	Establish global action plan to reduce combined Scope 1 and Scope 2 GHG emissions by 40% by March 31, 2020, relative to FY 2009/10. The plan will be reviewed and updated annually, at a minimum.
	wonawiae.		Reduce Lenovo's global Scope 1 + Scope 2 GHG emissions by 40% by March 31, 2020, relative to FY 2009/10.
Waste management	Minimize environmental impacts associated with	% nonhazardous solid waste recycled <sup>8</sup>	Maintain a global nonhazardous waste recycling rate > 90% (+/- 5%).
	solid waste generated from Lenovo operations and products.	Waste intensity <sup>9</sup>	Maintain a global waste intensity +/- 5% of the FY 2015/16 rate.
Supplier	Minimize potential environmental impact of Lenovo's Category 1, 2 and 3 suppliers	% Cat 3 suppliers audited	100% of Category 3 suppliers shall be audited and approved per Lenovo requirements.
environmental performance	Monitor and drive good environmental management practices in the Lenovo Supply Chain.	Supplier conflict free status	Improve conflict free status by 5% relative to CY 2015.
Transportation	Establish the foundation for driving future reductions in Lenovo international product transport carbon emissions.	Metric Tons CO <sub>2</sub> e	Streamline transportation supplier emissions reporting process.
Product end-of- life management	Ensure customer access to convenient, reliable and compliant product take-back programs.	Global coverage for take-back programs	Ensure take-back programs are available in all markets in which Lenovo sells product.

#### **Data Footnotes**

- 1: An exemption from targets in this area may be requested where the BU can clearly demonstrate achieving the target places the Lenovo product at a large price disadvantage against its competition.
- 2: For products for which a PAIA tool exists.
- 3: Availability of PCC plastics can be determined through consultation with Global Environmental Affairs and/or suppliers on the Lenovo Approved PCC Supplier list.
- 4: To drive increased usage of PCC, all BUs shall include a requirement for identifying PCC applications in new product development. PCC shall be used when technical specifications and cost parity are met.
- 5: PCC percentage is calculated using EPEAT methodology (i.e., net amount of post-consumer recycled content as percentage of total weight of plastic in product).
- 6: Energy intensity will be calculated at the global level as total electricity consumed per unit of product produced during the fiscal year.
- 7: This goal may be accomplished through energy efficiency, installation of onsite renewable generation, entry into power purchase agreements (PPA) with power providers, and/or the purchase of renewable energy credits and carbon offsets.
- 8: Percent of nonhazardous solid waste disposed of through reuse, recycle or incineration with energy recovery.
- 9: Waste intensity will be calculated at the global level as total nonhazardous waste generated per unit of product produced during the fiscal year.



# PERFORMANCE

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# 3.1 LENOV( A GI ANC

### **LENOVO GROUP LIMITED**

Lenovo is a US\$45 billion global Fortune 500 company and a leader in providing innovative consumer, commercial and data center technology, serving customers in more than 160 countries. Dedicated to building smart end-user devices and powerful infrastructure, Lenovo's business is built on product innovation, a highly efficient global supply chain and strong strategic execution. Formed by Lenovo Group's acquisition of the former IBM Personal Computing Division in 2005, the company develops, manufactures and markets reliable, high-quality and secure technology products and services. Lenovo's portfolio of products and services covers PCs, including the legendary Think and multimode YOGA brands, workstations, servers, storage, networking, smart TVs, and a family of mobile products like smartphones (including the Moto brand), tablets and apps. Additional information about Lenovo, including financials, committee reports and more, can be found in our annual and interim reports, which are available online at

www.lenovo.com/ww/lenovo/annual\_interim\_ report.html.

### LENOVO CORPORATE SUMMARY

- Founded: Beijing, China in 1984
- Incorporated: Hong Kong in 1988
- #202 on Fortune's 2016 Global 500; named a "Best Global Brand" by Interbrand
- Chairman & CEO: Yang Yuanqing
- Employees and contractors: Over 55,000 worldwide
- Headquarters: Lenovo is incorporated and headquartered in Hong Kong with major operational centers located in Beijing, China and Morrisville, NC, USA
- Public shares listed: Hong Kong Stock Exchange, stock code 992, February 1994; American Depository Receipts, stock code LNVGY, March 1995
- FY15/16 revenue: US\$44.9 billion

#### **ACQUISITIONS/JOINT VENTURES**

A list of Lenovo's principal associates and joint ventures can be found on page 210 of the FY 2015/16 Annual Report.



Revenue Analysis by Business Group for the year ended March 31 (US\$ million)





Research and Development Expenses as a Percentage of Sales



### WORLDWIDE OPERATIONS

- Operations in more than 60 countries worldwide
- Serving customers in more than 160 countries
- Primary operational hubs in Beijing, China; Singapore, Republic of Singapore; and Morrisville, North Carolina, USA
- Major research centers in Yokohama, Japan; Beijing, Shanghai, Xiamen, Chengdu and Shenzhen, China; Essen, Germany; and Morrisville, North Carolina, USA
- Manufacturing and assembly facilities in Beijing, Chengdu, Shanghai, Huiyang, Shenzhen, Wuhan, Hefei, and Xiamen, China; Pondicherry, India; Monterrey, Mexico; Manaus and Itu, Brazil; Gunma and Yonezawa, Japan; and Greensboro, North Carolina, USA.
- Call centers in North America, South America, Europe, Asia and Australia

### **PRINCIPAL CORPORATE LOCATIONS**

### Morrisville

1009 Think Place, Morrisville, North Carolina 27560, USA Phone: 866-45-THINK (866-458-4465)

### Beijing

6 Chuang Ye Road, Haidian District, Beijing 100085, China Phone: 86-10-5886-8888

### Singapore

151 Lorong Chuan, #02-01, New Tech Park, Singapore 556741 Phone: 65-6827-1000

See www.lenovo.com/ww/lenovo/investor\_ relations.html for more information about Lenovo.

## 3.2 CORPORATE GOVERNANCE

Responsible and ethical governance is the foundation of a sustainable company. Lenovo provides detailed information about its governance structure, policies and performance on pages 46-98 of the <u>Annual Report</u>. For quick reference, the following overview is provided.

The governing structure of Lenovo consists of the board of directors (the "Board") led by the Chairman. The Board and the Company's senior management strive to attain and uphold a high standard of corporate governance and to maintain sound and well-established corporate governance practices in the interest of shareholders and other stakeholders.

The Company abides strictly by the governing laws and regulations of the jurisdictions where it operates, and observes the applicable guidelines and rules issued by regulatory authorities. The Company regularly reviews its corporate governance system to ensure it is in line with international and local best practices.

Throughout the year ending March 31, 2016, the Company has complied with the code provisions of the Corporate Governance Code and the Corporate Governance Report (the "CG Code") set out in Appendix 14 of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the "Listing Rules"), and where appropriate, met the recommended best practices in the CG Code except for the deviation as explained on page 47 of the Annual Report. The Company has also adopted the Model Code for Securities Transactions by Directors of Listed

Issuers (the "Model Code") set out in Appendix 10 of the Listing Rules along with its guidance note



governing directors' securities transactions, and has implemented a company policy based on this Model Code to govern securities transactions by designated senior management of the Company.

## **BOARD OF DIRECTORS**

The Board is the highest governing body in the organization and is responsible for overseeing the overall strategy of the Company and directing and supervising its affairs in a responsible and effective manner. Management is responsible for the daily operations of the Company under the leadership of the chief executive officer of the Company (the "CEO"). The Company has a formal schedule of matters specifically reserved to the Board and those delegated to management. The Board has given clear directions to management as to the matters that must be approved by the Board before decisions are made on behalf of the Company or entering into any commitments on behalf of the Group. Further details on the responsibilities and delegation of the Board are set out in the <u>Annual Report</u> on page 63.

As of March 31, 2016, the Board comprises one executive director, namely Mr. Yang Yuanging; three non-executive directors, namely Mr. Zhu Linan, Mr. Zhao John Huan and Mr. Gordon Robert Halyburton Orr; and seven independent nonexecutive directors, namely Dr. Tian Suning, Mr. Nicholas C. Allen, Mr. Nobuyuki Idei, Mr. William O. Grabe, Mr. William Tudor Brown, Ms. Ma Xuezheng and Mr. Yang Chih-Yuan Jerry. The biographies and the diversity of directors are set out in the <u>Annual Report</u> on pages 140-143 and 50.

The Company has established three Board Committees: the Audit Committee, Compensation Committee, and Nomination and Governance Committee. Each Board Committee has defined terms of reference, which are available on both the websites of the Company (www.lenovo.com/ hk/publication) and Hong Kong Exchanges and Clearing Limited (www.hkex.com.hk). Further details on the composition, responsibilities and main activities in FY 2015/16 of these Board Committees are included in the <u>Annual Report</u> on pages 68-72.

### **BOARD ROLES**

The Board has a coherent framework with clearly defined responsibilities and accountabilities designed to safeguard and enhance long-term shareholder value and provide a robust platform to realize the strategy of the Group. A summary of responsibilities of leadership of the Company and those of the Lead Independent Director is set out in the Annual Report on page 49.

Currently, the Chairman leads the Board in the determination of its strategy and in the achievement of its objectives, and ensures that all directors are properly briefed on issues arising at Board meetings and receive adequate, complete and reliable information in a timely manner. The CEO has delegated authority from the Board to take direct charge of the Group on a day-to-day basis. Both the Chairman and CEO positions are currently held by Mr. Yang. The Board believes that the current governance structure, with a combined Chairman and CEO, the appointment of a Lead Independent Director and a vast majority of independent non-executive directors, provides an effective balance of power and authority for the management of the Company in the best interests of the Company at its present stage.

Finally, to address potential conflicts of interest at the Board level, it is expressly provided in the Company's articles of association that, unless otherwise permissible in the articles of association, a director shall not vote on any resolution of the Board approving any transaction, arrangement, contract or any other proposal in which he or she is materially interested, nor shall he or she be counted in the quorum present at the meeting.

### COMMUNICATION WITH SHAREHOLDERS AND **INVESTOR RELATIONS**

The Company is committed to safeguarding our shareholders' interests and believes that effective communication with shareholders and stakeholders is essential for enhancing investor relations and investor understanding of the business performance and strategies of the Group. To achieve this, the Company has established the shareholders' communication policy, which sets out various formal channels of communication with shareholders and other stakeholders to ensure fair disclosure and comprehensive and transparent reporting of the Company's performance and activities. Shareholders are provided sufficient notices of the Company's annual general meetings and are encouraged to attend and to actively participate in such meetings. All resolutions at the general meetings are conducted by way of poll voting. Results of the poll are published on the Company's website (<u>www.lenovo.com/hk/</u> publication) and Hong Kong Exchanges and Clearing Limited's website (<u>www.hkex.com.hk</u>).

Lenovo has also established an investor relations team to promote open, transparent, efficient and consistent communications with shareholders, investors and equity analysts. The team commits to proactively providing the investment community all necessary information, data and services in a timely manner, in order to promote a solid understanding of the Company's strategy, operations and new developments. During the FY 2015/16, the Company's senior management team presented its annual and guarterly earnings results through webcasts and physical meetings to communicate with shareholders, investors and analysts. Through various investor relations activities such as analyst briefings, conference calls and global investor roadshows, the senior management team presented and communicated with investors and analysts on the Company's strategy and developments.

PERFORMANCE

Further information about Lenovo's 2015 Annual General Meeting and investor relations activities is available in the <u>Annual Report</u> on pages 86-93.

### COMPENSATION POLICY

Lenovo recognizes the importance of attracting and retaining top-caliber talent, and is strongly committed to effective corporate governance. Consistent with this philosophy, the Company has a formal, transparent and performance-driven compensation policy covering its directors, senior management and general employees. Through this policy, Lenovo ensures that compensation is aligned to support the Company's business strategy, attract and retain top talent, reinforce the Company's performance-driven culture, and reflect the market practices of other leading international IT enterprises. Further information about the compensation policy is available in the <u>Annual Report</u> on pages 109-111.

### INTELLECTUAL PROPERTY

Lenovo respects intellectual property rights. It is the Company's policy to avoid any infringement of copyright or other intellectual property rights of other companies and individuals in the conduct of its business. Employees are expected to obtain and abide by licenses or other permissions as appropriate and as required.

### EMPLOYEE CODE OF CONDUCT

Lenovo strives to always operate in an ethical and legal manner. The Company has created an <u>Employee Code of Conduct</u> to inform and guide employees in their everyday conduct at the Company. All employees undergo a training program to promote further understanding and compliance with the Code. See the <u>Ethics and</u> <u>Compliance</u> section for more information about our Employee Code of Conduct.

### PUBLIC POLICY

Lenovo maintains good relationships with local governments around the world and seeks to be a responsible corporate citizen in the countries in which it operates. Lenovo requires its employees to be truthful and accurate in all communication with all government authorities. The Company strives to adhere to the highest standards of integrity and accountability when dealing with government rules and regulations. From time to time, Lenovo engages in lobbying, as appropriate and usually through industry trade association groups, to ensure that its voice is heard on matters of importance to the Company and its stakeholders.
# 3.3 LENOVC MANUFAC-TURING AND SUPPLY CHAIN OPERATIONS

Lenovo's end-to-end business model for greater vertical integration leverages owned manufacturing capabilities for greater control over both product development and supply chain operations. This model is unique among major personal technology manufacturers and is a significant source of competitive advantage, helping us to bring more innovation to market and more efficiently and aggressively attack new market opportunities. As Lenovo expands globally, we are establishing even deeper roots in each major market, investing not only in sales and distribution, but also in local domestic manufacturing, R&D and other high-value functions. With its innovation partners, Lenovo has built the industry's most resilient, speedy and efficient global supply chain - it provides significant time-to-market and time-to-volume benefits, enabling us to efficiently drive innovation and sharpen product differentiation as a significant and sustainable source of competitive advantage.

Lenovo focuses on sustainability across our manufacturing and supply chain organizations, and has key program owners in our manufacturing, logistics and procurement departments. The team also fully supports corporate environmental and sustainability program efforts for green and efficient products, corporate greenhouse gas emissions reductions, avoidance of hazardous substances, reporting transparency, post-consumer content use, and policy development.

- Lenovo's manufacturing organization ensures compliance with the Electronic Industry Citizenship Coalition (EICC) Code of Conduct and all applicable regulations, with a specific focus on occupational health and safety at our production facilities. Details on our sustainability manufacturing programs are included below.
- Lenovo's logistics organization is focused on increasing environmentally preferable shipping methods, reducing carrier greenhouse gas emissions, and engaging external and regulatory agencies to pursue continual improvement actions. Details on our successful carbon reduction initiatives are included in the GHG Emissions Performance section of this report.
- Lenovo's procurement organization has standard programs covering many areas. Presented here is information on supplier contractual stipulations, supplier performance reporting, environmental risk management and auditing, and EICC Code of Conduct compliance. We also have a comprehensive Supplier Code of Conduct. Topics discussed elsewhere in this report related to supply chain include hazardous substance avoidance, greenhouse gas emissions transparency and reduction, post-consumer content, conflict minerals avoidance, and supplier diversity.

## LENOVO MANUFACTURING **OPERATIONS**

All Lenovo global manufacturing locations are ISO 9001 (Quality), ISO 14001 (Environmental) and OHSAS 18001 (Health and Safety) certified. As required by these globally accepted standards, aggressive objectives and targets are being implemented at each Lenovo manufacturing facility to ensure ongoing continual improvement and a safe and healthy work environment for our employees.



Lenovo has been an active and ongoing member of the EICC since 2006. We have implemented the EICC Code of Conduct internally in our own operations and externally with our suppliers. We conduct regular occupational health, safety and environmental assessments at all internal global manufacturing locations and key outsourced manufacturing suppliers to provide high levels of regulatory and external management systems compliance, and to ensure that our commitment to social responsibility is continually improving.

We have completed independent EICC audits on our seven manufacturing facilities in China, Mexico and India. Overall results were rated strong by the third-party auditing organization and prompt corrective action was taken on identified improvement opportunities.

In addition, global supply chain (GSC) manufacturing assessments are regularly conducted at our top outsourcing manufacturing suppliers to validate the effectiveness of our suppliers' management systems and ensure a high level of regulatory compliance and safety performance.

## LENOVO PROCUREMENT **OPERATIONS**

As a member of the EICC, Lenovo has implemented the EICC Code of Conduct contractually with our suppliers. This includes the full use of EICC programs, tools and auditors. The EICC code is a key part of our overall Supplier Code of Conduct, and we require compliance with formal and specific EICC agreements. The EICC code covers many elements of labor, environmental and health concerns. In particular, it addresses child labor, working hours, overtime, time off, recruitment fees and flow-down of requirements upstream to all levels.



ELECTRONIC INDUSTRY CITIZENSHIP COALITION

Additionally, Lenovo directly participated in multiple EICC activities such as the Conflict-Free Smelter Initiative and the Environmental Sustainability work group.

It is important to note that in FY 2015/16, over 75 percent of our suppliers by spending were EICC members and 80 percent published formal corporate sustainability reports.

## CONTRACTUAL STIPULATIONS

Lenovo's standard purchase order (PO) terms and conditions stipulate supplier compliance with environmental specifications, hazardous material avoidance, ozone-depleting substance elimination, product safety, liability insurance and full compliance with all applicable laws, including export and import and product safety. Suppliers must also implement and maintain documented quality and environmental management systems that meet ISO 9001 and ISO 14001 certification standards.

Our base legal contract executed for suppliers reiterates and further expands the standard PO terms, and includes standard legal protections and responsibility assignments for Lenovo and the supplier. In particular, it stipulates that the supplier cannot discriminate against employees based on race, color, religion, sex, age, natural origin or any other legally protected class. Finally, we have separate formal contracts for supplier EICC Code of Conduct compliance that we execute with 95 percent of our suppliers by spending.

In FY 2015/16 we created a formal Supplier Code of Conduct to cover all aspects of sustainability and to ensure contractual coverage across all suppliers. The code is available at: www.lenovo.com/Supplier\_Code\_of\_Conduct.

## SUPPLIER PERFORMANCE EVALUATION AND BUSINESS REVIEWS

Lenovo's goals are to measure performance to specific criteria, to provide regular scorecard feedback, and to engage suppliers in business reviews and conferences. These activities serve as the foundation for mutual discussions on improving the business relationship, standards compliance and future business volume increases or decreases.

- Supplier performance is measured and reported in key areas, including: quality, delivery/flexibility, technology, cost reduction and service. Participation in sustainability programs is included as a penalty/credit multiplier in the calculations. We report our program status to senior management monthly and generally conduct about 175 report cards quarterly that cover 95 percent of our suppliers by spending. The key goals are to increase our business with suppliers who perform the best and to improve areas of weakness with under-performing suppliers. In the event a supplier does not adequately meet our expectations, business activity is discontinued.
- We engage suppliers tactically through various events and meetings. First is a significant annual supplier conference where the top executives from suppliers and Lenovo meet to build relationships and discuss overall performance and key initiatives for the new year. Second is a semiannual Lenovo Supplier Advisory Council meeting where Lenovo brings together executives from the top 20 suppliers. Lenovo executive participation for both of these events includes our CEO and Senior Vice Presidents from Supply Chain, Development and Sales, respectively. Third, top strategic and key suppliers have quarterly in-person meetings. All suppliers receive a formal report card.

- In FY 2016/17, we plan to modify supplier performance evaluation penalties and credits to transition more from transparency and participation to compliance and performance attainment. While we track activity on all our programs, managing all the data has been challenging. We will create a master supplier sustainability scorecard tracking over 25 key indicators across multiple sustainability programs and concerns.
- Category 3 is designated for suppliers who handle hazardous waste, special waste and product end-of-life management services. In these cases, approval of the Global Environment Affairs organization and environmental on-site audits are required. These suppliers are also subject to additional contractual terms and conditions and semiannual activity reporting.

In FY 2015/16, all required environmental audits were conducted on time and as required.

## ENVIRONMENTAL RISK MANAGEMENT

As required by the Lenovo Corporate Environmental Standards policy governing supplier relationships, the procurement team identifies areas of environmental risk based on specific criteria and then conducts prescribed actions to ensure risk is mitigated. Specifically, suppliers are classified by a risk category that drives the needed actions below.

- Category 1 suppliers are those from whom Lenovo purchases off-the-shelf goods, or uses processes or services produced or offered commercially and that are consistent with the supplier's normal business activities. In these situations, we typically do not require environmental audits because Lenovo is not directing specific activities of potential environmental risk.
- Category 2 suppliers are those that may or may not present environmental risks. In these situations, Lenovo specifies raw materials, process materials and/or process methods outside the typical business activities of the supplier, or the supplier alters its normal environmental activities as a result of Lenovo's business, such as changes to its environmental controls or permits. In these cases, a pre-assessment is conducted to determine if formal environmental audits must occur similar to those as required for Category 3 suppliers.

## EICC COMPLIANCE

As noted above, we implement a full EICC compliance program with our suppliers using formal contractual agreements that are separate from regular production or service agreements and statements of work. Following are details on requirements and implementation.

- The agreements require the supplier to:
  - » Comply with the EICC Code of Conduct
  - » Self-assess annually and report formally with EICC tools (EICC-ON)
  - » Receive audits biennially with independent, third-party EICC-approved auditors
  - » Provide audit reports and corrective action plans
  - » Require their own suppliers comply with the Code (which reinforces the code requirements for flow-down of requirements through the supplier chain)
- Key statistics are as follows:
  - » Ninety-five percent of core suppliers by spending were in the program (in FY 2015/16 "core suppliers" did not fully cover Motorola and System x, two recent, large Lenovo acquisitions; our total coverage in FY 2015/16 was approximately 85 percent of spend)

- » All targeted suppliers had formally executed EICC contracts in force
- » Ninety-five percent of self-assessments were conducted on time
- » Ninety-five percent of audits were conducted on time
  - a. Only one negative event was publicly reported during the year. Corrective actions were implemented immediately, a formal independent third-party EICC audit was conducted to verify the problem was fully resolved and strategic actions were taken to prevent reoccurrence.

Like many companies doing significant business in China, we recognize that excessive working hours and insufficient time off are key challenges. While we have much work to do, the percent of audits with priority findings in these areas has decreased significantly. In calendar year 2014, 47 percent of the audits had priority findings on excessive work hours and 28 percent had priority findings on time off. In calendar year 2015, the percent of audits with these findings declined to 12 percent and 8 percent, respectively.

It is important to note that Lenovo's implementation of the EICC Code of Conduct greatly exceeds the EICC membership requirements. The EICC code requires annual self-assessments of 80 percent of suppliers by spending and annual audits covering only 25 percent of any identified high-risk facilities. Thus, only suppliers identified as high-risk receive audits. We drive for annual self-assessments and biennial audits covering 95 percent of suppliers by spending. Additionally, the self-assessments include a supplier corporate-level assessment and an assessment of the specific site doing Lenovo business.

## SUPPLIER DIVERSITY

Lenovo sees mutual value in promoting diversity in our business relationships. It is a natural part of our business strategy to create a diverse and competitive supplier base and to strengthen economic development in historically underutilized communities. Through its Supplier Diversity Program, Lenovo is committed to maximizing the inclusion of diverse suppliers by identifying opportunities, developing and incubating relationships, creating processes that encourage diverse supplier integration, and building on our already strong culture of inclusion - The Lenovo Way.

Lenovo identifies diverse suppliers as those that are at least 51 percent owned and controlled by women, minorities, veterans, service-disabled veterans, and persons with a disability. Lenovo also includes suppliers that are defined by the U.S. Federal Government as a Small Disadvantaged Business, HUB Zone business or small business.

Lenovo partners with a variety of national and regional organizations such as the National Minority Supplier Development Council (NMSDC) and the Women's Business Enterprise National Council (WBENC) to facilitate supplier identification and program development. Lenovo is also active in local and regional events aimed at promoting, creating opportunities for, and celebrating diverse suppliers. Lenovo currently conducts more than US\$120 million in business annually with small and/or certified diverse suppliers. This represents all Lenovo operations in the United States (including our recent acquisition System x) except Motorola.

For more information, please visit our Supplier Diversity website at www.lenovo.com/supplierdiversity.



Lenovo was a sponsor of a regional North Carolina Business Leadership Network (NCBLN) event focused on promoting business opportunities to individuals with disabilities.

# 3.4 LENOVO PRODUCTS

Lenovo's product vision is to make life better and work more efficient by delivering smart end-user devices, powerful infrastructure, all with connected services and apps, and the best user experience. As we head toward an age of "Internet of Things" where everything around us can have computing, storage and networking built inside, our focus is on smart connectivity. With this connectivity devices become more controllable and manageable, expanding our capabilities. New smart services will be unleashed, such as home environment managers, health advisers, personal files managers, and even personal avatars and executive assistants. Based on this vision, mobile devices are a critical path to the future as the most important controller and the entry to other devices and cloud. However, this also means more demand for IT infrastructure and cloud infrastructure, representing huge opportunities in our Data Center business.

Aligned with our vision and strategy, our future innovation will focus on the following areas:

- Develop next generation smart devices, such as smart home, Virtual/Augmented Reality devices, robots.
- Build core technologies for device competitiveness, such as key components, natural user interaction, machine intelligence, network technology.
- Build smarter connectivity for users to move and synchronize content between devices – which we call "One Computing" – and retrieve content from the Cloud conveniently.

• Build efficient data centers, cloud infrastructure, solutions and services for future big data and cloud intelligence.

As part of our formula for success, we are adopting a new multi-business operating system to unleash the productivity and creativity of each of our three growth engines - PC, Mobile and Data Center. At the same time, we are integrating our traditional strength in end-user devices with our new capabilities in cloud and infrastructure to attack the balanced Device and Cloud opportunities.

## SUSTAINABLE QUALITY

Lenovo has a wellearned reputation for delivering superiorquality products and is committed to



ensuring that its products are safe throughout their life cycle. Lenovo relies on the principles of Product Life Cycle Assessment to ensure that every stage of the product's life is taken into consideration, including manufacturing, transportation, installation, use, service and recycling. This enables Lenovo to gain deep insight into opportunities for risk and cost minimization as well as insight into new opportunities for enhancing and increasing product marketability to meet the preferences of an increasingly informed public.

Corporate strategies, policies and guidelines have been designed to support Lenovo's commitment to product safety. Lenovo strives to ensure that our products meet all applicable legal requirements as well as voluntary safety and ergonomics practices to which Lenovo subscribes wherever our products are sold.

Lenovo's global Quality Management System, which has earned ISO 9001 (International Organization for Standardization) certification, ensures the continual delivery of design improvements into Lenovo's current and future products. Lenovo strongly embraces the ISO 9001 commitment to an effective quality management system, and is dedicated to exceeding industry standards for product quality and reliability.

To maintain this quality level, Lenovo employs an active closed-loop process with various feedback mechanisms. These feedback mechanisms provide quick resolution of customer issues. When product issues are discovered, we perform root cause analysis and feed the results back into manufacturing, development and test organizations ensuring that similar issues don't arise with current or future products.

Because Lenovo products fail less often and have a longer lifespan, fewer resources are required for their upkeep and end-of-life management.

Lenovo's comprehensive product development process includes prototype development, product testing and focus groups to ensure the Company meets the diverse needs of our global customers. For instance, Lenovo proactively seeks input on design and product features from customers and partners. Prototypes are extensively evaluated, and final products undergo rigorous testing to ensure that they meet stringent standards specific to their application and use before they are cleared for shipment.

Lenovo's Technical Evaluation Center provides information and recommendations to Lenovo engineering. Lenovo's Lessons Learned feedback loop aids in refinement and the maturation of our processes and elimination of recurring problems. As a result, Lenovo's product repair action rates are among the lowest in the industry.

PERFORMANCE

Lenovo leaders are responsible for establishing objectives and using measurements to drive continual improvement in quality and customer satisfaction. All Lenovo employees are expected to contribute to this continual improvement as an integral part of our quality management system.

Lenovo's corporate Quality Policy is available at: <a href="http://www.lenovo.com/quality">www.lenovo.com/quality</a>.

## CUSTOMER-FOCUSED TESTING

Once the product development phase is completed, Lenovo products undergo a series of customer-driven tests prior to production. Testing includes ongoing customer simulation evaluations and customer simulation audits to evaluate product quality by removing systems from the box and setting them up in typical customer configurations. Additionally, extended customer simulation tests are conducted on a sample basis with various configurations of product options and software. The last evaluation simulates the performance of the product through various standard customer applications.

Lenovo has continued to enhance our customerfocused program by sending technical teams to support on-site installations for customers.

During and after the installation, there is ongoing dialogue between the customer and Lenovo to ensure timely feedback on installation progress. This allows corrections to be quickly put in place, and for the team to pre-empt potential issues. Our methods have proven to be highly advantageous during new product releases, as potential issues can be promptly addressed to minimize the impact on all customers.

## SAFETY AND ERGONOMICS

Lenovo is committed to ensuring that our products are safe throughout their life cycle, including manufacturing, transportation, installation, use, service and disposal. Corporate strategies, policies and guidelines have been designed to support this commitment to product safety. Each employee bears a personal responsibility to advance the following objectives:

- Meet all applicable legal requirements, as well as voluntary safety and ergonomics practices to which Lenovo subscribes wherever we sell products.
- Select suppliers that demonstrate a similar commitment to safety.
- Provide customers with adequate information to enable them to safely use Lenovo's products.
- Foster employee involvement and provide appropriate resources to develop and implement successful product safety initiatives.
- Continually improve product safety initiatives.
- Investigate product safety incidents and take prompt remedial actions to protect Lenovo's customers and employees.
- Report on safety initiatives and incidents to senior executive management.

The following table shows the product life cycle stages in which health and safety impacts of products are assessed for improvement. All significant Lenovo products are subject to these assessments.

#### Hardware Safety Assessment Requirements at Life Cycle Points

Point in Product Life Cycle	Hardware Safety Assessed?
Development of product concept	No <sup>1</sup>
R&D	Yes
Certification	Yes
Manufacturing and production	Yes
Marketing and promotion	No <sup>2</sup>
Storage distribution and supply	Yes
Use and service	Yes
Disposal, reuse or recycling	Yes

<sup>1</sup> Too early at this stage

<sup>2</sup> Not relevant at this stage

With a focused emphasis on product safety and quality, Lenovo is achieving high customer satisfaction and delivering quality products, solutions and services.

Lenovo promptly investigates and responds to any potential safety or quality issue associated with our products. On March 27, 2014, Lenovo voluntarily recalled certain lithium-ion batteries. These batteries were manufactured for use with ThinkPad notebook computers that shipped worldwide between October 2010 and April 2011. This recall was updated on April 21, 2015. The updated recall includes batteries that were manufactured for use with ThinkPad notebook computers that shipped between February 2010 and June 2012. Lenovo is offering replacement batteries free of charge regardless of warranty status. More information about past Lenovo product recalls can be found here.

Lenovo's corporate Product Safety and Ergonomics Policy can be found at <u>www.lenovo.com/CSRPolicies</u>.

## ACCESSIBILITY

Lenovo is committed to providing people with disabilities greater access to information and technology. We are widely recognized for our focus on human factors and ergonomics and have a long-standing commitment to deliver world-class products and services that can be used by everyone. Smart design and intuitive functionality benefit everyone who uses technology, including those with disabilities. Lenovo products are developed to ensure compliance with established best practices and are tested with a variety of Assistive Technologies (AT), including screen readers, screen magnifiers and speech recognition software spanning different price ranges.

For more detailed information about how Lenovo provides assistance to users who have hearing, vision and mobility limitations and helps them get the most out of their computer experience, please visit www.lenovo.com/accessibility.

## COMPLIANCE

Lenovo products comply with the laws and regulations in each country to which we ship. Lenovo products are designed, tested and approved to meet worldwide standards for product safety, electromagnetic compatibility, ergonomics and other regulatory requirements when used for their intended purpose. More information on Lenovo Compliance Information can be found at <u>www.lenovo.com/compliance</u>.



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# 4.1 LENOVO EMPLOYEES

Lenovo is a truly global company. Our leadership team is diverse and balanced: the top 10 company leaders come from six different countries, and 17 nationalities are represented in the top 100. Lenovo's 55,000-plus employees and contractors speak more than 40 languages and live in more than 50 countries around the world. At Lenovo, we view our diversity as a key competitive advantage. This diversity in leadership and talent allows the company to take advantage of far-reaching industry trends, while at the same time leveraging the unique strengths of local leadership to drive success in key markets. While incredibly diverse, our team is united by our commitment, ownership and pioneer initiative. Our cohesive global culture and shared values are critical to driving the speed, efficiency, innovation and execution that separates us from the competition.

## OUR CULTURE AND PEOPLE

#### **Our Culture**

Our culture defines us ... it is our DNA. We call it The Lenovo Way – it is the values we share and the business practices we deploy. It is how we address our day-to-day commitments. The Lenovo Way is embodied in the statement: "We do what we say and we own what we do."

This culture also drives how we work every day, through what we call the 5 Ps:

- We PLAN before we pledge.
- We PERFORM as we promise.
- We PRIORITIZE the company first.

- We PRACTICE improving every day.
- We PIONEER new ideas.

Our culture is what has enabled us to consistently raise the bar on delivering breakthrough innovations, award-winning designs and strong financial performance.

#### **Our People**

At Lenovo, our people share a common aspiration to be the very best. Whether serving our customers, working together as a team or contributing to the community, we are working to build a unique company delivering unparalleled products created and supported by people who represent a wealth of cultures and experiences. Our strength lies in this diversity. And every day, on every project, we are creating a better place for inclusion and respect for others. We are dedicated to fostering an environment that encourages entrepreneurism and ownership – a workplace where people's talents can be challenged and their results recognized and rewarded.

## LABOR PRACTICES AND HUMAN RIGHTS

Lenovo is committed to respecting human rights in everything we do, and we extend those rights to our employees and others directly or indirectly employed in our supply chain. Since 2009 Lenovo has been a signatory and active participant in the United Nations Global Compact, a public-private strategic policy initiative for businesses committed to aligning operations and strategies with 10 universally accepted principles in the areas of human rights, labor, the environment and anti-corruption. As a signatory, we support and respect the protection of internationally proclaimed human rights and ensure that our business practices are not complicit in human rights abuses. Lenovo manages all operations consistent with the spirit and intent of the United Nations Universal Declaration of Human Rights and the International Labor Organization (ILO) Declaration on Fundamental Principles and Rights at Work.

Lenovo performs due diligence across the value chain to identify risks and avoid complicity in human rights violations. We provide access to grievance mechanisms, investigate allegations and escalate known cases of human rights abuse to senior leadership. Training and accountability for respecting human rights are integrated across the business and the supply chain. Lenovo has also set up a process where we engage internal and external stakeholders to address common challenges and advance human rights practices through continuous improvement.

For more information on how Lenovo protects human rights in its supply chain, please see section 4.2 on <u>Human Rights in Lenovo's Supply</u> <u>Chain</u>.

COMPENSATION, PERFORMANCE AND RECOGNITION

We believe that our employees are the most valuable strategic resource at Lenovo. We recognize the importance of each unique individual and their need to be recognized frequently and rewarded fairly. A fully engaged workforce is the key to our differentiation and exceptional business performance. Lenovo believes and invests heavily in the concept of Total Rewards, which consists of five key elements: compensation, benefits, work-life balance, performance and recognition, and development and career opportunities. We believe that collectively, these five elements are critical to attract, motivate and retain our most valuable strategic resource — our people. Lenovo's culture guides us in tying pay to performance. We believe that exceptional individual performance will support and drive exceptional business performance, which will result in exceptional pay for individuals. All "Key Performance Indicators" throughout the organization are linked to a business strategy.

In terms of our pay practices, we carefully monitor and evaluate market trends in each of our geographic locations to ensure that we remain competitive. Our culture allows us to react quickly when we see trends changing.

In addition to maintaining competitive wages, we have a comprehensive and globally consistent performance management and bonus program that we call the P3 Program. P3 stands for Priorities, Performance and Pay and is closely aligned to The Lenovo Way, the touchstone of our company culture that focuses us on delivering on our commitments and taking ownership in everything we do.

Lenovo's performance management system is critical, as our success depends on how well each of us achieves our individual goals and contributes to the company's strategic objectives. The P3 program is the means by which all Lenovo employees worldwide set their goals for the year, receive feedback on their performance and development needs, get evaluated on their performance, and, if eligible, receive a performance bonus payment. Sales employees and executives are assessed annually and non-sales employees are assessed semiannually. In addition to the annual assessment, sales employees also receive quarterly reviews. While formal assessments occur once or twice a year for all employees, managers are expected to provide ongoing feedback to their employees throughout the year.

Completion of employee performance reviews is tracked at the end of the performance review cycle to ensure each employee has received performance feedback as required. Reward and recognition are very important at Lenovo, so much so that we also encourage every business unit leader to develop supplemental programs, based on broad global guidelines, to reinforce frequent and continuous recognition of successful collaborative efforts and exceptional performance within their organizations.

Lenovo's compensation programs are designed to provide market-competitive compensation that will attract, motivate and retain talent:

- Base pay makes up an important part of an employee's total cash opportunity at Lenovo; it reflects the value of the job in the marketplace, performance and the value of individual contribution to the Company.
- Short-term incentive plans (including sales compensation) reward employees on overall corporate or team performance, while recognizing both individual performance and potential.
- Long-term incentive plans are specifically targeted to executives; however, topperforming, high-potential employees may also be eligible.

## GLOBAL BENEFITS

Lenovo recognizes the importance that employees and their families place on a comprehensive benefits package. To ensure that Lenovo can attract and retain high-quality talent in the competitive technology marketplace, a variety of benefits are offered that are intended to aid in managing and protecting the physical and financial well-being of employees and their families. Benefits packages are designed to follow these strategic guidelines:

- Position Lenovo competitively within the local marketplace
- Align with and support Lenovo business and cultural strategy
- Emphasize Lenovo's commitment to wellness

To achieve these goals, Lenovo must be flexible and consider varying customs, practices, legal requirements and employee expectations around the world to design impactful benefits programs.

#### Health and Wellness Benefits

Private health benefits such as medical, dental and vision care are offered in many countries to supplement government-provided health care. These arrangements often permit employees to provide coverage for dependents, including spouses, domestic partners, children or other family members. Employees may share in the cost of these benefits, especially when coverage for dependents is available. However, Lenovo shoulders the majority of these costs as an investment in the well-being of employees. Wellness is a critical component of a comprehensive benefits package. Lenovo believes that a successful wellness program can result in benefits that go way beyond the financial measure of reduced medical costs, with more productive employees and less absenteeism most notable among them.

"Live Well with Lenovo," the Lenovo wellness brand, was re-launched in 2012. The wellness program in the U.S. includes a health risk assessment and biometric screenings, health coaching, expanded nutrition and fitness tools, wellness seminars and other educational content, and a free employee membership in Lenovo's PowerUp fitness facilities located at both of our North Carolina campuses.

Lenovo currently offers a variety of wellness programs around the world, including fitness facility discounts, employee assistance programs, health coaching, stress and lifestyle management programs, medical consulting and screening services, and access to health educational material. Informational resources are made available globally to assist employees with wellness matters and disease prevention. To ensure successful business continuity planning, Lenovo has developed and activated comprehensive pandemic plans and procedures to limit the potential impact of health-related concerns, such as the H1N1 virus. As dictated by these procedures, health and safety information/ requirements are available and shared with employees and non-employees as needed. Lenovo's long-term wellness goals include the evolution of its wellness brand and related programs globally, under one comprehensive umbrella.

#### **Income Protection**

In the event that an employee is unable to work due to illness or injury, Lenovo provides for protection of income in many countries. These benefits may take the form of salary continuation for a period of time and generally supplement government-provided benefits. For longer periods of illness or injury, Lenovo commonly provides additional disability benefits.

#### **Retirement or Post-Employment Savings**

To supplement the income of employees and survivors after retirement or separation from Lenovo, a variety of savings programs are offered. These programs may be mandatory or voluntary, depending on legal and marketplace considerations. It is quite common for programs to have both an employee and employer contribution component, with the latter signifying Lenovo's willingness to make a current investment to provide future security for employees and their families.

It should be noted that even during volatile economic times and company performance, Lenovo did not reduce its contribution levels to employee retirement programs.

## EMPLOYEE DEVELOPMENT AND TRAINING

Lenovo is committed to its investment in talent development and has a robust and systematic approach to employee, manager and executive development. Lenovo's development agenda is targeted at building the capabilities of our people and our organization through three primary ways:

- Experiences on the job learning while doing. This is how 70 percent of all learning occurs.
- (2) Colleague relationships at Lenovo mentors, guides, coaches, managers. Employees learn through their successes, failures, guidance and advice. This is how 20 percent of learning occurs.
- (3) Education formal training in the classroom or online that teaches key principles and skills. This is how 10 percent of learning occurs.

Our systematic approach combines all three methods to maximize learning. It includes formal employee and leadership education programs, targeted people planning and international rotations, Global Leadership Project Teams, Women in Lenovo Leadership Forums, formal coaching networks, executive coaching, informal mentor programs, 360-degree feedback processes and a variety of additional assessment and development tools.

Lenovo's training includes regular mandatory online training courses for all global employees on "Code of Conduct" and compliance subjects. All Lenovo employees receive ongoing training in areas such as culture, compliance, information security, and performance management. All employees have career discussions at least annually.

## LEARNING@LENOVO

Lenovo launched a new learning platform this past year, marking the start of an exciting new journey to enable learning and professional development anytime, anywhere. The new system, entitled Learning@Lenovo, is designed to integrate learning resources, collaborative learning environments and tools, access to experts and user-generated content sharing. Lenovo is building an environment to support learning, development and best practice sharing across functions, geographies and cultures.

While Lenovo continues to provide access to the very latest in product training and skills development, Learning@Lenovo will take learning and development to a new level. There are Communities of Practice, created to grow and drive innovative thinking and best practice sharing. Curriculums, both virtual and in-person, have been created to address the knowledge and skills required to win in the always-connected Internet plus marketplace. All of this is just a single click away, with no need for employees to log in.

Learning@Lenovo capabilities include:

- Instant access to learning resources from anywhere within Lenovo's network
- Mobile access to learning communities and colleagues all over the world
- · Sharing of content and resources from experts and peers alike
- Integration to Workday to capture and celebrate development efforts

Learning@Lenovo represents a significant investment in the professional development of our employees. By consolidating our learning materials and courseware in one place, Lenovo will be able to leverage our knowledge assets across the organization and improve the learning experience for all employees.



#### Mentoring

Lenovo encourages mentoring relationships. They are an excellent vehicle for growing an employee's skills and knowledge in order to develop his or her full potential. Mentees and mentors both gain from participation in a mentoring relationship. Mentees can increase their understanding in the targeted subject area, and mentors can sharpen their leadership and coaching skills. To aid employees in the mentoring process, Lenovo provides two online courses: "Mentoring: Identifying Your Goals" and "Mentoring: Developing Relationships." Both courses include a simulation.

#### **Orientation & Training**

For over three decades, one of our key differentiators in the marketplace has been our people. We believe that our employees are our greatest asset. Our organization's practice has been to attract, develop and retain the best people around the world. With these philosophies in mind, we place a high emphasis on staff development and ensuring that our talented employees are able to take on new and different challenges. This philosophy begins on each employee's first days of employment in New Employee Orientation. This program introduces new employees to a wide variety of topics, including Lenovo's history and culture, diversity, business policies and practices as well as the tools and resources available to employees.

Lenovo encourages cross-cultural development by means of diverse experiences. Development is strengthened by the frequency and quality of the career-focused discussions that employees have with their managers. The management development program "For Those Who Manage" has a particular focus on improving career development discussions. The primary source of career development support comes from an employee's immediate manager. Employees are encouraged to take ownership of their careers and utilize a mix of work experiences, education and relationship building to aid in their growth, development and upward movement.

#### **Succession Planning**

Lenovo has an established organization and human resources planning process that ensures we:

- Have the right structure in place to deliver on our strategy
- Identify the talent needed now and in the future
- Invest in attracting, retaining and developing top talent
- Continue raising the bar on internal and external talent

## EMPLOYEE COMMUNICATIONS

Lenovo actively fosters open communication among employees – as well as communication between employees and the company – in several ways.

#### Meetings

To help make our employees effective and informed "brand ambassadors," Lenovo holds regular "All Hands" meetings in each of its business units and functions, typically on a quarterly basis. Employees attend in person when possible, with remote participation enabled through a combination of web stream and conference calls. These meetings feature ample opportunities for employees to ask questions, interact with each other and their senior leaders, and hear the latest on Lenovo's strategy and mission. Guest speakers help employees deepen their knowledge about other areas of the company. Meetings are recorded for later playback to ensure employees can review anything they may have missed. Lenovo's All Hands meetings help ensure that our employees are fully informed on the strategic direction of the company and that they have first-hand access to our senior leaders.

#### "Lenovo Listens" Employee Engagement Survey

Lenovo seeks the insights of its employees worldwide through its Lenovo Listens employee engagement survey. This survey is designed to gain insight on how Lenovo employees view their jobs, their management, their teams, their rewards and the company as a whole. Lenovo Listens is an important measure of employees' pride, motivation and commitment to staying at Lenovo. Research shows that measures of employee engagement can be used to predict the amount of effort that employees are willing to invest in their jobs, as well as employee retention. In addition, employee engagement can be tied to important measures of organizational performance, including financial results, customer satisfaction and operational efficiency.

Lenovo analyzes the data from the survey and encourages meaningful action planning to address any areas of concern. Post-survey focus groups are also conducted to better understand employee input and drive action planning at the management and corporate level for continuous improvement. Worldwide executive task forces created following the 2011 and 2012 surveys remain a focus for enhancing both innovation capabilities and operational efficiencies around the world. As in past years, results from the 2015 Lenovo Listens survey will help managers and employees identify specific actions to further increase team engagement and productivity.

## DIVERSITY

As a global company with a rich heritage drawn from the many countries where we have major investments and operate our business today, valuing and respecting diversity is instrumental to Lenovo's success. By leveraging the diversity of our workforce, Lenovo is able to exceed market expectations, attract and retain top talent and create a workplace where employees achieve their greatest potential.

Lenovo bases its corporate policies on the company's core values: customer service, an innovative and entrepreneurial spirit, teamwork across cultures, and trustworthiness and integrity. Lenovo's diversity policy is also grounded in these core values, seeking to drive innovation and creativity at Lenovo by leveraging both the similarities and differences of our diverse, talented and global workforce.



Diversity and Inclusion Development at the HR Academy

#### **Diversity Executives**

Lenovo has a globally dispersed, multicultural management team with broad expertise that sponsors key culture initiatives. Lenovo's key diversity executives include:

- Yang Yuanqing, Chairman and CEO, serves as executive diversity sponsor
- Gina Qiao, SVP, Human Resources, serves as executive sponsor of Women In Lenovo Leadership (WILL), Lenovo's global women's initiative
- Yolanda Conyers, VP, Human Resources, serves as Lenovo's Chief Diversity Officer

#### **Key Diversity Initiatives**

- Women in Lenovo Leadership (WILL) was launched in 2007 on International Women's Day with the purpose of addressing key priorities that support women's growth in and contribution to the company. WILL has regional leaders around the world, including in Australia, New Zealand, Brazil, Canada, China, France, Western Europe, UK, India, Japan, South Africa and the United States. These leaders provide developmental activities based on the interests and needs of women in their region.
- Fran O'Sullivan Scholarship was initiated in 2010. Women attending any U.S. accredited college majoring in math, science or engineering are eligible to receive this \$5,000 scholarship.
- Lenovo's Women's Leadership Development Program was launched in 2015. The purpose includes accelerating the development of Lenovo's high-potential women leaders, preparing women to assume significant leadership roles and providing candidates an extended leadership experience to accelerate individual, team and business results.
- Veteran Forum is an informal group led by Lenovo veteran employees who participate in internal and external activities designed to increase the recruitment and retention of military veterans.

 Participation in Gay, Lesbian, Bisexual and Transgender activities, including Gay Pride parades, forums and employee groups.

#### **Supplier Diversity**

Lenovo also sees mutual value in promoting diversity in our business relationships. To read more about our Supplier Diversity program, please see the <u>Supplier Diversity</u> section.

## EMPLOYEE RETENTION

To ensure retention of key talent, Lenovo uses the following strategies and programs:

- Conducts global employee engagement survey (Lenovo Listens) to help identify opportunities to reduce the loss of key talent.
- Leverages compensation programs such as long-term incentive stock-based awards and recognition to help retain key talent.
- Ensures pay (base and incentive) is differentiated so top performers are paid on par with peers in the marketplace.
- In cases where key, critical talent have opportunities outside Lenovo, the company takes specific "critical save" actions in an effort to retain these employees.

The Lenovo population is composed of regular (permanent) employees, supplemental (temporary) employees, and contract workers. From time to time, the senior leadership makes a business decision to move work from one country or region to another in support of the business strategy and objectives. When these decisions are made, great care is taken to ensure affected employees and non-employees alike are provided with notice as required by local and/or country laws. Employees are provided with severance packages and career and training assistance where possible, and as required by local/country laws.

## PRIVACY

Lenovo is committed to protecting the personal data of our employees, customers, resellers and others. Corporate strategies, policies and guidelines support this commitment to protect personal information. Managers and employees are responsible for following Lenovo's Data Privacy Policy for collecting, using, disclosing, storing, accessing, transferring or otherwise processing personal information.

<u>Click here</u> to see Lenovo's Data Privacy Policy (or go to <u>www.lenovo.com/CSRPolicies</u> and follow the link from there).

## ETHICS AND COMPLIANCE

Lenovo has a global ethics and compliance program, which is guided by our Code of Conduct. The company's Ethics and Compliance Office oversees ethics and compliance across the organization, working in partnership with our business units to see that we achieve our business goals while meeting the letter and spirit of the legal and regulatory framework in which we operate. Our ethics and compliance program promotes an organizational culture that encourages the highest ethical standards of business conduct and a commitment to compliance with the law. The Ethics and Compliance Office is committed to raising awareness about the importance of ethics and compliance in the workplace and plays a critical role in providing employees with the guidance, resources and information they need to make informed and appropriate choices and decisions. With these systems in place, we describe clear expectations for employees and hold them accountable for their behavior.

Our Code of Conduct helps to ensure that employees understand the company's expectations. The Code applies to all employees worldwide and is an integral part of our ethics and compliance program. The Code also demonstrates Lenovo's commitment to a culture of uncompromising integrity and assists employees so that they can make well-informed decisions. In addition, the Code helps employees determine when to seek advice and where to obtain it.

In keeping with best practices, Lenovo has also developed and implemented an Anti-Bribery and Anti-Corruption Policy, which reinforces the Code of Conduct and provides additional specific guidance regarding compliance with rules and laws related to bribery and corruption. All Lenovo employees are required to comply with all policies and the Code, which is available in seven languages and is accessible on our website along with other policies at www.lenovo.com/CSRPolicies.

Each newly hired Lenovo employee receives training and information about our ethics and compliance program, and all employees are required to participate in subsequent mandatory training sessions held on a regular basis to reinforce the company's commitment to compliance and to conducting business with integrity. Additional information about ethics and compliance is provided through the company's intranet and other periodic communications.

#### **Raising Questions or Concerns**

Lenovo provides guidance to its employees regarding how to raise questions or concerns about any aspect of their work at Lenovo, and has established clear processes and reporting channels. Employees are directed to report to their managers or other resources, including but not limited to, human resources, the Ethics and Compliance Office, internal audit, corporate security or the Lenovo legal department, any information pertaining to:

- Fraud by or against Lenovo
- Unethical business conduct
- Violation of legal or regulatory requirements
- Substantial and specific danger to health and safety
- Violation of Lenovo's corporate policies and guidelines, particularly our Code of Conduct

In addition, Lenovo provides formal, confidential ways to report when potential violations of law, company policy or the Code of Conduct occur. These include postal mail, email and our LenovoLine, which is a confidential reporting system accessible 24 hours a day, seven days a week by secure website or toll-free telephone with translators available. Where allowed by law, employees may report concerns about business practices anonymously if they choose. The LenovoLine and other resources are also available to help counsel employees who may have questions or concerns. Reports of inappropriate behavior, policy violations or alleged retaliation will, to the extent permitted by law and consistent with an effective investigation, be kept anonymous and confidential. Lenovo regards any suspected violation of law, policy or the Code as a serious matter and is committed to following up on all reported concerns, which are addressed and tracked to resolution.

Lenovo has a clear non-retaliation policy, and will not tolerate harassment, retaliation, discrimination or other adverse action against an employee who:

- Makes an internal report in good faith
- Provides information or assists in an investigation regarding such a report
- Files, testifies or participates in a legal or administrative proceeding related to such matters

Managers are required to report and help resolve any suspected violation of the non-retaliation policy. Complaints of alleged retaliation will be promptly addressed and investigated.

Questions about anything relating to ethics and compliance may be sent by email to Lenovo's Ethics and Compliance Office at <u>ethics@lenovo.com</u>. Lenovo also provides detailed information about its internal controls framework and enterprise risk management, including ethics and compliance, on pages 77-84 of its Corporate Governance Report in the Lenovo FY 2015/16 Annual Report.

## OCCUPATIONAL HEALTH AND SAFETY

To attract the best employee talent, Lenovo is committed to creating and maintaining a workplace that provides for employee health and safety. We expect and deliver world-class health and safety programs and processes throughout our global manufacturing locations. We attribute our success to our Occupational Safety and Health Management System, comprising education, planning, prevention, controls, checking, and a strong commitment to continual improvement.

Our core values are highlighted in <u>Lenovo's</u> <u>Corporate Policy- Responsibility for Employee</u>

<u>Health and Safety</u>. The policy establishes a framework for ensuring a safe and healthy work environment for all of our worldwide employees. Every employee and contractor collectively follows this policy and must report any safety or health concerns to management. New facilities are fully integrated and measured to meet this high standard of expectation as our business footprint changes.

#### Health and Safety Performance

At Lenovo, our incident rates continue to be significantly below the industry average. Our standardized occupational health and safety programs are designed to meet or exceed regulatory requirements and are a foundation for ensuring a safe and healthy work environment for our employees. During this reporting period, there were no significant accidents involving fires, property damage or regulatory violation at any of our locations in over 60 countries in which we do business. The Occupational Health and Safety (OHS) organization is committed to ensuring the implementation of an effective health and safety management system. All global manufacturing locations are OHSAS 18001 certified by Bureau Veritas, a leading independent certification body.

In addition, all our manufacturing locations undergo a rigorous internal audit process to ensure a high level of regulatory and OHS compliance. All China manufacturing locations

have been certified to the nation's Work Safety Standardization regulation within the country. And lastly, we continue to monitor the performance of our key worldwide contract manufacturing locations to ensure a high level of regulatory and management system compliance.



#### Training

A successful health and safety program begins with training. It is mandatory that all employees follow Lenovo safety and health requirements at all of our global manufacturing locations. In addition, Safety Committees are in place at all manufacturing and select field locations. This provides a means for employees to bring forward potential safety concerns. Safety Committee members engage on a wide range of health and safety topics and participate in necessary corrective action processes. Field location employees receive applicable health and safety tips and information such as workstation ergonomics.

#### **Employee Wellness**

Health information and resources are made available to assist employees on disease prevention and various wellness matters. Health and safety information is also offered and shared with non-Lenovo employees on an as-needed basis. Additionally, at our worldwide manufacturing locations we offer and implement a number of comprehensive wellness initiatives to support the health of our manufacturing colleagues. Examples include: medical screening; immunization clinics; eye, ear and dental examinations; diet and nutrition; and exercise. There are also efforts to promote a healthy lifestyle, such as helping people with quitting smoking. In support of business continuity planning, Lenovo has developed and implemented comprehensive plans and procedures to limit the potential impact of emerging health or safety-related concerns.



Immunization clinic in Itu, Brazil

#### **Recognition and Awards**

Lenovo receives a number of annual awards for products and services. However, we are most proud of the range of occupational health, safety and environmental performance recognition that we received from external parties and local or national governmental agencies. Here are a few examples:

- In April 2015, Lenovo Medion in Essen, Germany received ISO 14001 Certification by Bureau Veritas (BV).
- In May 2015, the Lenovo United States Fulfillment Center (USFC) in Whitsett, NC received its seventh consecutive *"Gold Award."*
- In June 2015, Lenovo NEC in Yonezawa, Japan received OHSAS 18001 Certification by Bureau Veritas (BV).
- In June 2015, Lenovo Morrisville, NC headquarters receive their ten consecutive "Gold Award" while Lenovo Enterprise Business Group in Morrisville collected their second "Gold Award" from the North Carolina Department of Labor for low incident rates reported in 2014.
- In June 2015, Lenovo Beijing, China, received the "Safety Culture Demonstration" award from the local government.



- In July 2015, Lenovo Huiyang, China, was featured in the "Guangdong Occupational Safety and Health Magazine" with an impressive story on the successful safety culture at the plant.
- Also in July 2015, Lenovo Xiamen, China, was solely recognized with the "Credibility and Integrity Company for Environmental Protection" award by the local government.
- In August 2015, Lenovo Itu, Brazil, attained "OHSAS 18001" Certification by Bureau Veritas (BV).
- In January 2016, Lenovo Taiwan received the "Badge of Accredited Healthy Workplaces" certificate from the Minister of Health and Welfare.

# 4.2 HUMAN RIGHTS IN FNO\/C SUPPLY CHAIN

Lenovo respects human rights in all its activities, including those involving its supply chain. We manage all operations consistent with the spirit and intent of the United Nations Universal Declaration of Human Rights and the International Labor Organization (ILO) Declaration on Fundamental Principles and Rights at Work. We also have been a signatory to the United Nations Global Compact since 2009. As a signatory, we support and respect the protection of internationally proclaimed human rights and ensure that our business practices are not complicit in human rights abuses.

As an Electronic Industry Citizenship Coalition (EICC) member, Lenovo has adopted the EICC Code of Conduct as operating principles for our company and our suppliers. All worldwide manufacturing sites conduct EICC self-assessments in independent third-party audits. For suppliers, EICC compliance contracts serve as required compliance plans and the supplier self-assessments and audits serve as compliance certifications. Taken as a whole, the contracts, self-assessments and audits signify our commitment to the Code's principles and willingness to uphold its standards, which include protecting the human rights of workers.

#### Conflict Minerals

Lenovo recognizes the importance of concerns regarding the sourcing of materials containing tin, tantalum, tungsten and gold (3T/G). When sourced from regions experiencing political and social conflict, which may include the Democratic Republic of the Congo or surrounding countries, these materials are referred to as "conflict minerals." We fully support the efforts of the EICC, Conflict Free Smelter Initiative (CFSI),

NGOs and governmental bodies to solve this complex issue, and have supported these efforts with our EICC membership dues since 2006 and direct participation in EICC programs.



An initiative of the EICC and GeSI

In FY 2015/16, we continued our comprehensive due diligence program to understand the chain of custody of conflict minerals in our supply chain. This program included compliance with the requirements of the U.S. Securities and Exchange Commission's Dodd-Frank ruling and with the OECD Due Diligence Guidelines for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.

A comparative benchmark analysis of 23 major international companies indicated that Lenovo has a high-quality program delivering transparency and performance. Furthermore, independent studies by the Responsible Sourcing Network/Sustainalytics and Assent Compliance/ Tulane University groups corroborated the comprehensiveness and competitiveness of Lenovo's program, policies and conflict minerals reports.

Full details and statistics on our reasonable country of origin inquiry, due diligences and smelters can be found on our website at: www.lenovo.com/social\_responsibility/us/en/ Lenovo\_Conflict\_Minerals\_Update.pdf

Lenovo's specific activities included:

- Industry-leading Conflict Minerals policy validated by independent third-party review.
- Engaging suppliers through formal contracts and directly validating their due diligence efforts via independent third-party EICC audits.
- Participating in CFSI Conflict Mineral conferences and workgroups.
- Holding regular education sessions for internal employees, publishing quarterly newsletters and providing supplier training as needed.
- Extensively utilizing the EICC Conflict Minerals Reporting Template (CMRT) for Reasonable Country of Origin Inquiry (RCOI) efforts across 90 percent of our procurement spend and our supply chain.
- Utilizing the EICC Conflict Free Smelter Program (CFSP) and the Smelter Information Exchange (SET) to identify the status of smelters reported as being in our supply chain.
- Reporting the program status to Lenovo's Chief Sustainability Officer.
- Publicly reporting the smelters and refiners in our supply chain.

In FY 2015/16 we significantly improved our overall conflict-free status from 50 percent to 63 percent considering all reported smelters. Excluding reported entities not yet validated as true smelters, our performance improved from 68 percent to 75 percent conflict-free. Supplier CMRT response rates were 100 percent. Attainment to CMRT questions improved across the board with an average improvement of eight points. For example, suppliers with Conflict Minerals Policies improved from 86 percent to 95 percent. We also attained 100 percent conflict-free tantalum. Finally, during the year we were challenged with two large corporate acquisitions and integrating their supplier bases and associated conflict minerals programs. We completed about 75 percent of the integration effort.

In FY 2016/17 we will complete the acquisition integration and get our program coverage back to 95 percent of suppliers by spending. We will increase our level of outreach to smelters directly and via greater participation in the CFSI Smelter Engagement team. Specifically, we will target direct contact with all smelters that are not compliant or active to pressure them to become compliant. We anticipate a 5-10 percent increase in compliant smelters annually. Our aim and expectation is to attain a fully conflict-free compliant smelter supply chain as soon as possible.



The Pioneering Achievement in Lenovo: The creation of Lenovo's first Supplier Code of Conduct.

#### The Individual Behind It:

David Martin, Manager, Global Supply Chain Controls & Sustainability

#### The Story:

Fiscal year 2015/16 was a year of accomplishment at Lenovo with regard to supply chain sustainability. The speed at which these accomplishments were made would not have been possible without the persistence and dedication of David Martin.

Among the hats David Martin wears is managing Lenovo's supply chain sustainability programs. David pioneered the creation of Lenovo's own <u>Supplier Code of Conduct</u>, which in addition to requiring suppliers to adhere to all laws, rules and regulations of the countries in which they operate, details Lenovo's expectations with regard to supplier ethical, social and environmental performance. Suppliers are contractually obligated to comply with the Supplier Code of Conduct, and Lenovo assesses compliance in making procurement decisions.

David also drives Lenovo's ethical sourcing initiatives and has helped the company progress toward its goal of becoming conflict free. In FY2015/16 for 95 percent of its core supplier spend, Lenovo achieved 100 percent conflict-free status on tantalum. Lenovo also improved the overall conflict-free status of validated smelters from 68 to 75 percent.

#### Insights from David:

Why does Lenovo care about the sustainability performance of its suppliers?

"The core definition of sustainability is meeting the needs of today without sacrificing the needs of tomorrow. When you consider the size of Lenovo's supply chain we can have a significant positive impact in the communities where we operate. We want Lenovo to be respected not just for innovative products but also for being a socially responsible company."

How can you and your colleagues promote a more sustainable world?

"First, all of us can be sustainable in our day-to-day work and our personal lives by focusing on efficiency, using less, recycling and reusing more. Second, we can have a dramatic and personal impact in tens of thousands of people's lives, whether they are our suppliers' employees or our customers."

# 4.3 SOCIAL INVESTMENTS

## COMMITMENT

Lenovo annually commits up to one percent of its pretax income to global social investment programs and initiatives. As a result, the size of our programs continues to grow as the company grows. The more success we achieve, the more we are able to share that success with those around us. Our investments focus on three program areas: Next Generation Hope Fund; Global Disaster Assistance; Community Outreach, Collaborations and Partnerships.

## NEXT GENERATION HOPE FUND

Lenovo's Next Generation Hope Fund invests in social programs targeting education, entrepreneurship, disaster relief and regional community outreach. Lenovo provides assistance through financial contributions, equipment donations and employee volunteer hours. To measure success, we evaluate the effectiveness of each investment against predefined goals.

Lenovo aims to advance, enhance and extend education at all levels. We support educationrelated programs and initiatives through our industry-leading products and technologies, community investments and program sponsorships. We do not limit the scope of our education-related social investments, but rather we consider each opportunity based on its own merits. Lenovo donates equipment, provides financial contributions and lends expertise to schools and related organizations across all global markets. Lenovo supports global education investments in both K-12 and higher education.

#### Objectives

- Advance, enhance and extend education at all levels
- Donate equipment, provide financial contributions
- Lend our expertise to schools and related organizations across all global markets
- Support global education investments in both K-12 and higher education

#### Framework

- We enable communities to do more through social investment that supports a wide range of programs, including those focused on education, research, entrepreneurship, disaster relief and regional community outreach.
- Lenovo provides assistance through financial contributions, equipment donations and employee volunteer hours.
- Regional offices establish extensive relationships with their local communities and regional nongovernmental organizations.

## GLOBAL DISASTER ASSISTANCE

Lenovo has a long-standing practice of assisting when disaster strikes. We are committed to helping communities lacking the infrastructure and resources needed to recover from catastrophic loss. In February 2016, for example, an earthquake with a magnitude of 6.4 struck in southern Taiwan, causing building collapses and a number of casualties. Lenovo Group and its subsidiary LCFC immediately donated 10 million TWD to the quake-affected Tainan City to support disaster relief work.

## COMMUNITY OUTREACH, COLLABORATIONS AND PARTNERSHIPS

#### North America





Lenovo aims to enhance and extend education to enable the next generation of thinkers and leaders. Specifically, Lenovo North America is committed to strengthening its impact on science, technology, engineering and math (STEM) education for K-12 students.

Together with NAF (formerly the National Academy Foundation), Lenovo expanded the Lenovo Scholar Network to serve 30 academies for the 2015-16 academic year in high schools across the U.S. This mobile app development program provides a robust curriculum as well as the tools and resources to help students particularly from urban, underrepresented communities and military families - become the next generation of developers. More than 1,700 students are now learning to code and using Lenovo technology to develop apps. Visit www.lenovoscholars.com to learn more about these innovative student projects.



Many Lenovo community programs are offered to expose students to STEM careers and provide critical, hands-on learning opportunities. During the Students at Work initiative in March 2016, Lenovo partnered with more than 120 middle school students as well as North Carolinabased nonprofit Kramden Institute to refurbish PCs for more than 200 students without a working computer at home. In addition, Lenovo in the Classroom initiatives connected more than 65 Lenovo employees with more than 2,000 NAF academy students across the U.S., virtually and in person. Lenovo employees engage in STEM career discussions, and spend time interacting with students, providing real-world advice and answering career questions, as part of a workbased learning continuum.

A long-standing partner of Boys & Girls Clubs, Lenovo and its employees have hosted science fairs, mentored students after school, and donated countless hours to renovating, cleaning and building technology centers in Boys & Girls Clubs. In 2015, Lenovo employees donated 75,000 school supply items to equip members in 11 clubs throughout the U.S. with tools needed for academic success.



After floods devastated the Columbia, South Carolina Boys & Girls Club in September 2015, a team of 50 Lenovo employees took a four-hour bus ride to surprise Club members with a fully renovated space, including a new media center, games area and a dedicated teen room. Positioned as a holiday surprise, Lenovo treated the Club members to an unexpected afternoon of fun, including artificial snow, hills for sledding, holiday treats and Lenovo tablets for 125 children and staff.

Lenovo offers corporate matching gift and volunteer grants programs to support employees who donate time and financial resources to nonprofits and causes that are important to them. Since 2005, Lenovo and its employees have donated more than \$12M to numerous charitable causes. Lenovo offers all employees in the U.S. and Canada an annual employee benefit of eight hours paid time off to volunteer at nonprofits about which they are passionate. In addition, employees are invited to participate in Lenovohosted community service projects. In FY 2015/16, Lenovo employees in North America volunteered more than 19,000 hours, supporting a wide variety of community issues, including Habitat for Humanity, Boys & Girls Clubs, local nonprofit Dress for Success of the Triangle and local food banks.

Many of these hours were dedicated to serving military men and women and their families. Last year, Lenovo and employees partnered with the USO of North Carolina to build 225 bikes for military families, worked with the US Veterans Corp to collect 15,000 pounds of holiday toys, and hosted its largest-ever service project where 500 Lenovo volunteers built 14.000 care packages with personal care items for service men and women. In conjunction with the National Football League's (NFL) Salute to Service program, Lenovo launched the #LenovoSalutes social media campaign to benefit the United Service Organizations (USO). The program encouraged the public to show support for servicemen and women and resulted in a \$25,000 technology grant to build a new media center at

the USO-North Carolina's Charlotte Center. Lenovo technology now allows service troops and families who visit the winning USO center to connect with loved ones online, apply for jobs, check email and even watch movies.

#### **Asia Pacific**

Lenovo AP has long been committed to using technology as a tool to support education. In 2011 we began our partnership with Room to Read (RtR), a global nonprofit organization that has enabled 10 million children in the developing world to receive education. In FY 2015/16 Lenovo finalized the donation of 500 ThinkPad laptops to RtR operations across Asia, dramatically improving RtR's ability to effectively administer programs across rural communities. These laptops often are the first exposure children in RtR programs have to technology. Different offices in Lenovo AP also implement their own community outreach and partnerships. In Australia and New Zealand, Lenovo team members invested their own time through volunteer efforts in various community initiatives, including the Make-A-Wish Foundation Christmas party in November, 2015. At this event, team members supported children with special needs and their families by manning stands and assisting with food service.

Additionally, Lenovo proudly supported the Aim for the Stars Scholarship awarded by The Layne Beachley Foundation, which supports the initiative and passion of girls and women who are committed to achieving a dream.

Lenovo Hong Kong saw the need to encourage a stronger e-learning program among local schools. To address this, a Learning with Lenovo campaign was launched between June and September, 2015, which involved the donation of 320 Yoga Tablet 2 products to key institutions. In December, Lenovo Hong Kong also collaborated with Food Angel, a food rescue and food assistance program, to help instantly connect donors with beneficiaries via Lenovo mobile devices. A video was shot and later aired on BuzPlay and in Hong Kong's bustling Langham Place. Over 800,000 views were garnered across Facebook and YouTube, and the public screening reached 2.6+ million people in Hong Kong.



Lenovo India partnered with NDTV, Coke and iScuela to provide 40 tablets for two government schools in Punjab. The collaboration also provided teachers with IT training, converting content into local languages (Punjabi) and helping students improve academically via e-learning on the Lenovo tablets.

Lenovo India has also supported three additional initiatives, including:

- Nepal flood relief, where one million Indian rupees were donated for relief efforts for areas hit by deadly floods and landslides from monsoons in June 2015.
- Chennai flood relief, where 500,000 Indian rupees' worth of mats, blankets and other rescue resources were provided to areas impacted by deadly flooding in November 2015.
- Organizing a food-fest within their office to collect funds for sponsoring a Christmas lunch at a local orphanage.

In Indonesia, Lenovo saw the need to educate students on how to safely and effectively use the Internet, which has been a growing need amidst a rapidly expanding digital landscape. A program was developed that addressed how youth can protect themselves against cybercrime and establish a savvy online computer culture.



In Malaysia, Lenovo, together with Microsoft, launched a partnership with the Good Samaritan Home orphanage. Both companies visited the orphanage, which is home to 30 children aged four to 18, to spend time with the beneficiaries. Lenovo also donated three new Lenovo C20-05 All-in-One systems pre-installed with Microsoft Office 2015 to assist the children with their studies.

Lenovo Philippines' ongoing partnership with the annual Ten Accomplished Youth Organizations (TAYO) Awards, which champions youth innovation, continues to be a focus. As the official IT partner of the last awards, Lenovo Philippines provided devices to assist the search, screening, evaluation, tabulation and presentation of projects. Winning youth, whose projects best addressed social needs in their communities, were presented with a Lenovo PHAB. As part of the sponsorship, Lenovo created a "Most Innovative Project" award, which was presented to Project LIBRO. This proposal focused on building mini libraries in public schools in remote parts of Cebu, aiming to promote literacy and develop academic skills.

In Thailand, Lenovo donated THB110,000 (~USD3,000) worth of products to four schools across rural Thailand. The beneficiaries included Baan Na Som Bul School (Ubon Ratchathani province), Wat Kok Trang School (Nakhon Si Thammarat province), Wat Boat School (Phra Nakhon Si Ayutthaya province), and a police force's school building project.



Lenovo Vietnam addressed an urgent local community need by donating IdeaCentre 300 systems to Viet Tri Vocational School in the Phu Tho Province. These devices met the school's pressing need for learning equipment and have helped disadvantaged students learn necessary IT skills to address future career opportunities.



#### Our focus on these projects is to use Lenovo technology to reduce gaps in education and social activities with the goal of achieving greater equality among children and young people. Last year, through our programs in France, Israel, Romania and the UK, we provided 77 Lenovo devices (desktops, laptops, tablets and large screens) installed in nine facilities. As a result, more than 1,000 people accessed the equipment and improved their IT skills and capabilities. In addition, 740 people accessed educational tools and programs. The projects provided 52 IT classes and workshops with over 40 volunteers involved.



#### Europe, Middle East and Africa (EMEA)

Lenovo EMEA is now in its second year of a partnership with United Way, which has been extended to include two new projects to expand our reach in providing children and young people with greater access to education. Through the United Way partnership, Lenovo helps to evolve the way children and young people use technology. The new agreement means that Lenovo continues to support specific projects in France, Israel, Romania and the United Kingdom with cash donations, and, in 2016, supports one project in Spain and one project in Poland with both cash and Lenovo product donations. This year we will do even more. Our project in Spain is aimed at 4-18 year-old students and their families who are at risk of dropping out and/or social exclusion. The project will provide afterschool groups with information technology (IT) equipment and additional materials sufficient for three hours of activity each day covering 850 students across five after-school groups. In Poland, 350 children aged 6-16 years old from disadvantaged families at risk of social exclusion will benefit from two IT rooms newly equipped with computers and materials. The IT rooms will be used for running special skills training and workshops on Microsoft Word, Excel, PowerPoint graphic programs and much more to equip children with the skills to find work in the future.

In October 2015, executives from Lenovo EMEA held center stage at the 11th Women's Forum Global Meeting. As a corporate sponsor for the tenth year running, Lenovo EMEA had a strong presence at this annual event which took place in Deauville, France, under the theme "Energizing the world!"

For the first time, we co-sponsored the Creativity Lab in partnership with Altran, Safran, General Electric Corporate and Airbus. At the Creativity Lab we showcased Moto 360 watches and the Magic View concept with great interest from attendees.

Leading the Lenovo delegation was Eric Cador, EMEA president, who took part in the CEO Champions initiatives on the theme "Advancing women in the private and public sectors: building and strengthening the pipeline." Referring to McKinsey Global Institute's study on the power of parity in the world, which demonstrates how advancing women's equality at work can add \$2 trillion to global growth, the discussion covered several topics and in particular the challenges faced by companies to identify, attract and retain key female talent.

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Lenovo EMEA hosted Conference InterElles in Paris in March, 2016, an event attended by 650 people from technology companies, the French Ministry of Women, experts and the media.

EMEA President Eric Cador attended the event and joined a panel of CEOs to discuss the progress made in diversity in the last 15 years, the length of time the Cercle InterElles group has existed. The event was led by Catherine Ladousse, Executive Director of Communication EMEA and the French Lenovo Women's Network.

#### China

In May of 2015, children with autism at Beijing Stars and Rain received a new gift from Lenovo – Lenovo Pads. Beijing Stars and Rain, founded in 1993, is China's first nongovernmental educational organization dedicated to serving children with autism. Through Pads and software, Lenovo hopes to provide teaching courses for autistic children, drawing on science and technology to enable different learning experiences. Lenovo, seeking to further explore the value it can bring to education, signed a strategic cooperation agreement with the Jiangsu Provincial Department of Education in Nanjing in November 2015. Lenovo will leverage its history of IT innovation and talent cultivation in working with its new partner on such areas as IT development, creating innovation hubs, cultivating dual-position teachers, and fostering student entrepreneurship. The alliance between Lenovo and Jiangsu Provincial Department of Education has become an important catalyst for vocational education reform in Jiangsu Province and will play a key role in provincial and national vocational education development.

#### Motorola Mobility Foundation

Motorola Mobility Foundation enables and drives innovation to improve the communities where we live and work. We do this by tapping into our employee expertise and talent, providing funding, and partnering with nonprofits, learning institutions, startups, government, corporate and civic organizations. Motorola Mobility Foundation focuses its efforts on four main areas: Science, Technology, Engineering, Arts and Math (STEAM) education; Entrepreneurship; Technology Access; and Community Engagement.





The multifaceted activities we carried out in FY 2015/16 are described below. Motorola Mobility Foundation resources provided for these activities derived from funds donated to the Foundation before FY 2015/16.

 Partnered with Citizen Schools Illinois to help close the opportunity gap for underserved middle-school students throughout Chicago by offering 10-week apprenticeships. Since



2013, nearly 70 Motorola employees have dedicated over 3,000 hours of service through Citizen Schools, teaching such topics as solar car design, mobile app creation, the next big tech and journalism.

- Worked closely with the Illinois Science and Technology Coalition R&D STEM Learning Exchange. Motorola Mobility is one of 50 partner organizations that supports high school students by mentoring them as they solve real-world problems over the course of a semester, encouraging problem-based learning and exposing students to STEM careers.
- Developed the Chicago Maker Challenge in 2014 through a partnership with Citizen Schools and the Chicago Public Library. The Chicago Maker Challenge engages middle and high school students from around Chicago in creating a hardware or software solution that either solves a community problem or makes the world more accessible to people with disabilities. Over 120 students competed by submitting a one-to-five minute video showcasing their solution, with winners competing in the live Chicago Maker Challenge Showcase at Motorola's headquarters. Visit www.ChicagoMakerChallenge.org for more information.
- Sponsored 1871, Chicago's premier startup hub located in the Merchandise Mart. Motorola Mobility Foundation is a founding sponsor of 1871's WiSTEM Incubator, which is designed to support female entrepreneurs and bring their businesses to the next level.
- Partnered with ADA 25 Chicago for a year of events to celebrate the 25th anniversary of the Americans with Disabilities Act. Motorola Mobility hosted the ADA 25 Chicago Hackathon, which challenged individuals to create mobile apps and software solutions that make Chicago more accessible to people with disabilities.
- Provided a variety of volunteer opportunities throughout the year, which range from oneday commitments to month-long programs. As a result, Motorola Mobility employees contributed nearly 4,000 hours of volunteer service. The increase in volunteer hours compared to prior years was driven in part by the expansion of Motoserve, an employee day of volunteer service, to include our Sunnyvale, CA, office location. Between Chicago and Sunnyvale, 335 employees contributed nearly 2,000 volunteer hours in just two days.





# PLANET

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# 5.1 LENOVO'S ENVIRONMENTAL COMMITMENT

Lenovo's long-term, comprehensive approach to environmental management encompasses everything from site operations to product design to recycling and product end-of-life management. Lenovo has developed a set of corporate strategies, policies and guidelines designed to support environmental responsibility. Each manager and employee, as well as any contractor working on a Lenovo site, bears a personal obligation to uphold Lenovo's environmental commitments.

Lenovo's Corporate Policy on Environmental Affairs is provided below.

#### Lenovo Corporate Policy on Environmental Affairs

Original approval date: October 10, 2006 Revision effective date: March 31, 2016

As a global citizen, Lenovo strives to exhibit leadership in environmental affairs in all of its business activities and to provide long-term, innovative solutions to support our customers. The requirements listed below support this goal and apply to Lenovo's worldwide operations. Every Lenovo organization must support this policy and each manager and employee, as well as any contractor performing work on behalf of Lenovo, shall bear a personal responsibility for the objectives established in this document.

#### Compliance

Meet or exceed all applicable environmental requirements for all Lenovo activities, products, and services, including legal requirements, standards, and voluntary commitments to which Lenovo subscribes.

#### **Environmental Protection**

- Proactively protect the environment through the use of sustainable business practices and processes that minimize health and safety risks, mitigate Lenovo's climate change impact, improve the energy efficiency of Lenovo's operations and products, minimize waste and prevent pollution, and ensure responsible and safe disposal of waste.
- Be an environmentally responsible neighbor in the communities where we operate and act promptly and responsibly to correct conditions that may endanger health, safety, or the environment.

#### **Product Environmental Attributes**

 Conserve natural resources by developing products and packaging that minimize materials usage, promote the use of recycled or environmentally preferable materials and that maximize reuse and recycling opportunities at the end of the product's life.

- Develop, manufacture, and market products that are energy efficient and that minimize their impact on the environment.
- Provide innovative hardware, software, and cloud based solutions to enable energy efficiencies for our customers and their communities.
- Promote reliable product take-back services in all regions in which we sell.

#### Supply Chain

- Ensure Lenovo's supply chain supports and complies with Lenovo's environmental requirements and engage them to meet environmental objectives and targets that support Lenovo's long-term goals.
- Reward leadership in sound environmental practices, energy efficiency and carbon reduction efforts in our supply chain through our procurement selection practices.

#### **Continual Improvement**

- Drive innovation and continually improve Lenovo's environmental management system and performance with a strong focus on our key environmental aspects.
- Set aggressive objectives and targets, implement action plans to achieve them and measure our performance against each objective and target to insure that we stay on track.
- Audit Lenovo's and our suppliers' facilities and operations to ensure performance is consistent with our stated commitments.
- Provide appropriate resources to fulfill these objectives.

Corporate strategies, policies and guidelines must support this commitment to leadership in environmental affairs. Every employee and contractor of Lenovo must follow this policy and report any environmental, health, or safety concerns to Lenovo management, who must take prompt corrective action.

Yang Yuanqing, Chief Executive Officer

## ENVIRONMENTAL LEADERSHIP

Lenovo is an innovative, global technology company that has a history of being recognized for environmental performance and leadership. Some of our environmental accomplishments in FY 2015/16 include:

- Lenovo's Xiamen plant was honored as a "Credit Enterprise of Environmental Protection" by the Xiamen environmental protection bureau in July 2015.
- Lenovo was awarded a Corporate Sustainability Leadership Award by CDP in November 2015. The award recognized Lenovo's response to climate change leadership.



- Lenovo was awarded a Certificate of Recognition as one of the Top 20 Companies in the Hong Kong Business Sustainability Index.
- All ThinkPad systems were certified with UL Environment Gold and were registered EPEAT Gold for the US.
- All ThinkPad systems were certified with GREENGUARD Gold.



- All ThinkPad systems were ENERGY STAR<sup>®</sup> 6.1 qualified.
- The following ThinkPad systems were certified to TCO 5.0: ThinkPad X260, ThinkPad P70, ThinkPad Yoga 260, ThinkPad L460,

ThinkPad P50, ThinkPad P40 Yoga, ThinkPad X1 Yoga, ThinkPad Yoga 460, ThinkPad X1 Carbon, ThinkPad T560, ThinkPad P50s, ThinkPad T460. The ThinkPad T460 was the first notebook product awarded certification to the new TCO 5.0 requirements.



- The ThinkPad X1 Tablet and ThinkPad 10 Tablet were certified to TCO Tablet 3.0.
- All IdeaPad products were ENERGY STAR<sup>®</sup>
   6.1 qualified.
- All IdeaPad products were GREENGUARD certified.
- All worldwide desktop products were certified GREENGUARD Gold.
- All worldwide desktop products were ENERGY STAR<sup>®</sup> 6.1 qualified.
- All worldwide ThinkCentre products were registered EPEAT Gold in the US.



- The following ThinkCentre products were certified with TCO: ThinkCentre M700z, ThinkCentre M800z, ThinkCentre M900z, ThinkCentre X1.
- The following ThinkCentre products were certified to the IEEE 1680.1 standard by UL's Sustainable Products Certification program: ThinkCentre M800 SFF and Tower; ThinkCentre M900 Tiny, SFF, and Tower; ThinkCentreM900z; and ThinkCentre X1.
- The ThinkCentre X1 received a certified Product Water Footprint.
- The following ThinkCentre products were certified with TÜV Green Mark: Think Centre M800 SFF and Tower; Think Centre M900 Tiny, SFF, and Tower.



- The following ThinkCentre products were certified with the GS Mark: ThinkCentre M600 Tiny; ThinkCentre M700 Tiny; ThinkCentre M800 SFF and Tower; ThinkCentre M900 Tiny, SFF, and Tower; ThinkCentre M800z; ThinkCentre M900z.
- Integrated System x servers and Motorola Mobility into Lenovo's EU WEEE reporting procedures.
- Lenovo was rated CSR Gold by EcoVadis and achieved 71/100 points.
- Over 85 percent of all servers were ENERGY STAR<sup>®</sup> qualified.
- All servers were CECP and CELP certified where applicable.
- All servers are tested for VOC and ozone emissions against regulatory and potential health impact standards.
- All Lenovo EU offices were ISO 50001 certified for a newly implemented energy management system, covering 37 offices in 23 EU countries.



- Two Lenovo EMEA offices moved to green buildings Paris and Stuttgart.
- Lenovo's Digital Park 1 leased office in Bratislava was certified to Platinum EBOM LEED. This was the first EBOM Platinum award in Central Europe.
- Lenovo's EMEA offices participated in Earth Hour 2016 on March 19, 2016.

Lenovo's business model is based on developing and manufacturing outstanding technology products and related services. As such, it is the product that forms the basis for all elements of the environmental strategy. Everything from product design to supplier selection, facility management, distribution and logistics and product life cycle management evolves from our focus on products.

## LENOVO'S ENVIRONMENTAL MANAGEMENT SYSTEM

Lenovo manages the environmental elements of its operations through a global environmental management system (EMS) that covers Lenovo's global manufacturing, research, product design and development activities for PCs, workstations, servers, storage, smart TVs and a family of mobile products, including smartphones, tablets and apps. Lenovo China manufacturing and R&D sites are certified to the requirements of ISO 14001:2004 by the China Electronics Standardization Institute (CESI). Lenovo's manufacturing and product development facilities outside of China are certified to ISO 14001 by Bureau Veritas (BV).



Lenovo NEC is ISO14001 registered with the Japanese Quality Assurance Organization (JQA).

<u>Click here</u> to view Lenovo's Global ISO 14001 registration certificate.

## ISO 14001 Registered Manufacturing & Development Facilities

#### Manufacturing - Administration

- No. 6 Chuangye Road, Beijing, China
- No.2 Building, No. 8 Chuangye Road, Beijing, China
- No. 32 Chuangye Middle Road, Beijing, China

#### **Manufacturing**

- Lenovo Science & Technology Park, Huiyang, China
- No. 68 Building, 199 Fenju Road, Shanghai, China
- No. 2 Building, 955 Shangfeng Road, Shanghai, China
- No. 88 Tianjian Road, Chengdu, China
- No. 20 Tao Hua Road, Shenzhen, China
- ISH2 and Shuncang Buildings, Shenzhen, China
- No. 999 Qisan North 2nd Road, Xiamen, China
- No. 316 Boulevard Escobedo, Apodaca, NL, Mexico
- RS No. 19, Thavalakuppam Village, Pondicherry, India
- 9 32 Nishiyajima-cho, Ohta-shi, Gunma, Japan
- 6-80, Shimohanazawa 2-Chome, Yonezawa, Japan

#### **Development**

- No. 6 Shangdi West Road, Beijing, China
- 696 Songtao Road, Shanghai, China
- Nanyi Road, Shenzhen, China
- 🔋 3-6-1 Minatomirai, Nishi-ku, Yokohama, Japan
- Am Zehnthof 77, Essen, Germany, 45307

#### **Administration**

No. 627 Wuyi Road, Dalian City, China

#### Manufacturing, Development

- 3188-1 Yungu Road , Hefei, Anhui Province, China
- No. 19 Gaoxin 4th Road, Wuhan, Hubei, China

#### **Development - Administration**

• 1009 Think Place, Morrisville, NC, U.S.

#### Manufacturing and Fulfillment Center

6540 Franz Warner Parkway, Whitsett, NC, U.S.

During FY 2015/16, Lenovo maintained its position as the world's largest PC company and continued its push into the server, mobile device and cloud service markets. Managing the integration of the System x and Motorola Mobility businesses, employees and facilities into Lenovo's existing EMS is an ongoing process. Lenovo is maintaining its focus on our key commitments to ensure compliance, prevent pollution and reduce our environmental impact, develop products with industry-leading environmental attributes and continually improve our global environmental performance.

Within the framework of our EMS, Lenovo annually identifies and evaluates the aspects of our operations that have actual or potential significant impacts on the environment. Metrics and controls are established for these significant environmental aspects. Performance relative to these metrics is tracked and reported on an ongoing basis. Performance improvement targets are established for select environmental aspects annually, taking into consideration performance relative to the environmental metrics, the Environmental Policy, regulatory requirements, customer requirements, stakeholder input, environmental and financial impact, and management directives. During FY 2015/16 our significant global environmental aspects included:

- Product materials including use of recycled plastics and environmentally preferable materials
- Product packaging
- Product energy use
- Product end-of-life
- Site energy consumption
- Site air emissions
- Supplier environmental performance
- Transportation
- Waste management
- Water management

<u>Click here</u> to see Lenovo's FY 2015/16 global environmental performance against its objectives and targets.

Lenovo began external verification of a portion of its reported environmental data during FY 2010/11. The verification included FY 2009/10 and FY 2010/11 energy and GHG emissions data. In FY 2011/12, FY 2012/13, FY 2013/14 and FY 2014/15 Lenovo performed at a reasonable level of assurance for energy, GHG emissions, waste and water data.

<u>Click here</u> to see the FY 2015/16 GHG Verification Statement or visit <u>www.lenovo.com/climate</u> and follow the link from there.

<u>Click here</u> to see the FY 2015/16 Waste and Water Verification Statement or visit <u>www.lenovo.com/WaterandWaste</u> and follow the link from there.

## COMPLIANCE -REGULATORY AND VOLUNTARY - THE FOUNDATION OF OUR EMS

Lenovo's commitment to environmental stewardship begins with a commitment to compliance. This includes compliance with both regulatory requirements and voluntary standards set forth by associations and standards organizations to which Lenovo subscribes in support of managing and minimizing the environmental impact of our operations and our products. We verify our compliance through regular periodic internal and third-party audits of our facilities and operations. In FY 2015/16. Lenovo received no notices of violation nor incurred any known breaches of regulatory requirements. Our commitments to voluntary programs and standards are described in the sections below.

#### 1. Associations

#### DIGITALEUROPE

DIGITALEUROPE represents the digital technology industry in Europe. Members include some of the world's largest IT, telecom and consumer electronics companies and national associations from every part of Europe. DIGITALEUROPE aims for European businesses and citizens to benefit fully from digital technologies and for Europe to grow, attract and sustain the world's best digital technology companies. Lenovo signed the membership agreement in March 2014 and became a full member of DIGITALEUROPE starting April 2014.

## Electronic Industry Citizenship Coalition (EICC)

As a member of EICC, Lenovo adopts the EICC Code of Conduct in all five critical areas: labor, health and safety, environment, management system, and ethics. Lenovo actively participates in EICC's Environmental Sustainability group, which includes projects related to supply chain carbon emissions/ water/waste reporting systems and tools, among others. Lenovo also participates in the EICC Extractives working group/Conflict Free Sourcing Initiative, which focuses on issues surrounding conflict minerals.

- Information Technology Industry Council (ITI) Lenovo has a board-level position on the ITI Environmental Leadership Council, which provides guidance on key environmental issues, including recycling, energy, materials and green procurement.
- <u>Consumer Technology Association</u> (CTA) Lenovo is a member of the Consumer Technology Association and participates in industry discussions around recycling, product materials, energy, and other topics as hosted by CTA.

#### 2. Green Programs (Eco-Labels)

 IEEE 1680.1 Standard for Environmental Assessment of Computer Products. Many Lenovo products meet the IEEE 1680.1 standard and are certified to the standard by our partner UL Environment in many cases. In addition, Lenovo registers products that meet the 1680.1 standard to the Electronic Products Environmental Assessment Tool (EPEAT<sup>™</sup>), which rates computers and monitors based on 51 criteria over eight categories including toxics reduction, recycled content, energy efficiency, ease of recycling, product longevity, company environmental performance, product take-back and recycling programs, and packaging. Computers and monitors are awarded a rating of Bronze, Silver or Gold based on their performance. Gold-rated computers meet all required criteria, plus at least 75 percent of the optional criteria that apply to the product type being registered.

#### ENERGY STAR®



ENERGY STAR® is a joint program between the U.S. Environmental Protection Agency and the U.S. Department of Energy conceived to promote

energy efficiency and reduced greenhouse gas emissions. Products meeting certain standards earn an ENERGY STAR® label. Such labeling identifies and promotes energy-efficient products and helps customers make smarter buying decisions based on lowering electricity costs.

#### GreenGuard



GreenGuard Certificates are awarded by UL Environment's GREENGUARD Certification program for contribution toward improving public health and quality of life through

improvement of indoor air. Performancebased standards are incorporated in the selection criteria for products with low chemical and particle emissions.

#### <u>TCO Certified</u>



TCO Certified is an international third-party sustainability certification for IT products. By choosing TCO Certified computers,

displays and other devices, businesses and organizations around the world are able to help meet environmental and social challenges associated with electronics. Certified product models must meet all criteria and are tested and verified for compliance by independent, accredited third parties. This applies to environmental and product performance criteria as well as socially responsible manufacturing.

#### <u>TCO Certified Edge</u>



For best-in-class products, TCO Certified Edge offers additional recognition for leading-edge performance in a specific area, such as

ergonomics or use of recycled materials. TCO Certified Edge is a supplemental certification intended for products that are at the forefront of technology and sustainable design.

#### <u>TÜV Rheinland Green Product Mark</u>



TÜV Rheinland Green Product Mark provides consumers and buyers with

guidance in identifying green and sustainable products. Products are awarded the Green Product Mark signifying compliance with various sustainability regulations and requirements.

UL Environment's Sustainable Products
 <u>Certification</u>

To earn this certification, products must undergo rigorous in-house testing

at Underwriters Laboratories to the IEEE 1680.1 standard on various dimensions including energy efficiency, design for recycling, and materials usage.

#### 3. Programs, Workgroups and Initiatives

<u>Call2Recycle</u>

The Call2Recycle program provides free recycling of rechargeable batteries at over 30,000 drop-off locations in the U.S. and Canada. Lenovo has been a licensee of Call2Recycle since 2006.

• <u>CDP</u> (formerly Carbon Disclosure Project) Lenovo discloses its quantitative GHG emissions data and qualitative information such as risks and opportunities, and climate change strategy through CDP's worldwide public database.

- Coalition for Energy and Environmental Leadership in Leased Space
   Lenovo is a member of this coalition and uses the Environmental and Energy Efficiency
   Attributes checklist as an evaluation process for new leased buildings.
- ECMA-370 The Eco Declaration Standard Developed in accordance with international standards, ECMA-370 provides guidelines for the type of environmental data that should be disclosed about a given product. Lenovo's environmental data sheets provide basic information on the environmental attributes of each product covering material use, energy efficiency, acoustics, packaging, disassembly and recycling that follow the ECMA-370 standard.

#### <u>EcoVadis</u>

EcoVadis aims at improving environmental and social practices of companies by leveraging the influence of global supply chains. EcoVadis operates the first collaborative platform enabling companies to monitor the sustainability performance of their suppliers by an independent third-party assessment. Lenovo has been participating in EcoVadis since 2012. In 2016, Lenovo was rated 71/100 Points, putting Lenovo in the highest EcoVadis category - CSR Gold. Lenovo is therefore in the top six percent of suppliers assessed by EcoVadis in the category Manufacture of Computers and Peripheral Equipment, and in the top two percent of all suppliers assessed by EcoVadis in all categories.

• <u>Electronic Product Stewardship Canada</u> Lenovo is a board member of this organization which supports innovation and enhanced end-of-life solutions for electronics products in Canada. • Global Reporting Initiative (GRI) GRI is a network-based organization that issues the world's most widely used sustainability reporting framework. This framework establishes principles and indicators that organizations can use to measure and report their economic, social and environmental performance. Lenovo supports this standardized approach to reporting and structures its annual sustainability report based on the GRI framework.

#### • Green Freight Asia (GFA)

GFA is an organization that promotes better air quality and more livable cities in Asia. Lenovo joined two GFA working groups in November 2012: the Private and Public Stakeholder Engagement group that is focused on developing stakeholder strategies, processes and platforms for engagement between public and private stakeholders; and the Methodologies and Tools group that is working on developing the mechanism and tools for measuring energy efficiency of carriers and aligning verification procedures with accredited certifiers. Lenovo was a member of GFA's Steering Committee in 2013 and was one of the founding members that officially launched GFA in October 2013.

 International Standard ISO 14001, Environmental Management Systems
 All Lenovo's manufacturing and research and development sites are ISO 14001 certified.

#### Leadership in Energy and Environmental Design (LEED)

In 2012, Lenovo's Real Estate organization set goals to ensure that future spaces will be LEED Certified or Equivalent and to help embed energy-efficient/green features. Additionally, LEED training was provided to several Lenovo real estate managers worldwide during 2012 and 2015. Some of Lenovo's buildings are LEED certified or are working toward being recognized as LEED certified.  Product Attribute Impact Algorithm (PAIA) Project

Lenovo is engaged with academic and industry partners in the development of a streamlined carbon life cycle analysis methodology for calculating the product carbon footprint (PCF) of information and communications technology products.

Responsible Recycling (R2 Leaders)
 Lenovo follows the development of
 implementation activities and uses many
 electronics recyclers that comply with this
 standard and is a member of R2 Leaders.

#### <u>United Nations Global Compact</u>

Lenovo joined the UN Global Compact in January 2009. Lenovo's annual Communication on Progress expresses a commitment to continued support of the UN Global Compact and its 10 principles, identifies targets, defines performance indicators and reports outcomes.

- U.S. Environmental Protection Agency's Green Power Partnership (EPA GPP) Lenovo has been a partner with this voluntary program supporting organizational procurement of green power by offering expert advice, technical support, tools and resources since September 2010.
- <u>World Resources Institute</u> (WRI) and <u>World</u> <u>Business Council for Sustainable Development</u> (WBCSD)

Lenovo continues its support of the WRI/ WBCSD GHG Protocol, most recently supporting development of the GHG Protocol Scope 2 Guidance.

Lenovo recognizes the importance of environmental leadership in China and has participated in numerous environmental initiatives in the country, including:

- China Energy Conservation Program (CECP)
  This program is a voluntary initiative/
  certification for saving energy and reducing
  emissions by motivating manufacturers to
  produce more energy-efficient products and
  supporting consumers in making more
  sustainable purchases. This certification,
  qualified by the China Quality Certification
  Centre (CQC), sets forth minimum allowable
  values of energy efficiency and energy grades
  for microcomputers. Lenovo has the largest
  number of PC products certified by CECP.
- China Environmental Labeling Product (CELP)
   This labeling program is a voluntary initiative
   assessing electronic products. It includes
   mandatory and optional environmental
   criteria such as reduction/elimination of
   environmentally sensitive materials, product
   longevity/life extension, high energy
   efficiency/energy conservation, end-of-life
   management and other dimensions. This
   certification is qualified by the China
   Environmental Labeling Certification Centre
   (CEC). Lenovo has the largest number of PC
   products certified by CELP.

#### PC+ China Energy Law (CEL)

Lenovo was an active participant in the establishment of this series of standards. Lenovo provided internal test data, test machines and technical and human resources to support establishing the standards. Lenovo led work on establishing the PC energy efficiency standards. Lenovo also organized the PC industry meeting and coordinated the gathering of stakeholder input. Lenovo was also the major owner of the upgraded Visuals energy efficiency standard, and the upgrade of the Printer energy efficiency standard. Lenovo continued to support the establishment of a server energy efficiency standard. • Energy Saving Work Association of the Chinese Institute of Electronics

Lenovo is the Vice Chair of the Energy Saving Work Association of the Chinese Institute of Electronics. In this capacity, Lenovo actively supports the Chinese government on green ICT policies. Through the Association, Lenovo helps lead the PC industry to participate in and perform projects that support the development of green product attributes. Participation in the Association provides a platform for sharing best practices in China. Lenovo continues to provide resources to support the development of the Energy Saving Work Association.

#### • China RoHS Standard Working Group Lenovo is the Vice Chair of the China RoHS Standard Working Group. Lenovo actively participates in providing technical expertise in the establishment of this series of standards.

China WEEE Working Group

Lenovo actively participates in this work group, supporting the development of Chinese governmental WEEE policies, regulations and standards.

 China MIIT EPR (extended producer responsibility) Recycling Pilot Project
 Lenovo is actively participating in a recycling pilot project managed by four Ministries (Ministry of Industry and Information Technology, Ministry of Finance, Ministry of Commerce, and Ministry of Science and Technology). Lenovo hopes to find a solution to promote the recycling rate of information and communications technology products through the project.

#### China ePCF Project

Lenovo is leading the work on establishing the ePCF platform/database to calculate product carbon footprint based on LCA methodology. Lenovo is working with the Chinese Institute of Electronics (CIE), Sichuan University and Sichuan IKE Company to provide support to establish calculation tools, data/information collection and related standards in the project.

# China MIIT Eco-Design Pilot Enterprises Program

Lenovo was recognized as an Eco-Design Pilot Enterprise by China MIIT (Ministry of Industry and Information Technology). Through the platform, Lenovo will share sustainable practices with others in industry in China. Lenovo will continue to provide resources to support the development of the program.

## PRODUCT LIFE CYCLE MANAGEMENT

Lenovo strives to show that the effective use of more efficient information and communication technology (ICT) equipment can deliver tremendous environmental results. Lenovo's product environmental strategy focuses on:



#### **ENERGY-EFFICIENT PRODUCTS**

Lenovo's historical and continued focus on product energy efficiency provides a strong product differentiator in a market and regulatory environment that increasingly values these attributes. Our development process places a premium on energy efficiency and drives continued improvements in operational efficiency. As a result, Lenovo is well positioned to benefit from an increasing demand for energyefficient products with smaller carbon footprints.

Energy efficiency is a targeted attribute of the Lenovo product development process. Improvements in product energy efficiency are consistently part of our key environmental objectives and targets. Lenovo offers a full complement of notebooks, desktops, workstations, monitors and servers that meet ENERGY STAR<sup>®</sup> and other certification standards.

For more information about Lenovo's energyefficient products, visit <u>www.lenovo.com/energy</u>.

#### PRODUCT ENERGY MANAGEMENT FEATURES

Lenovo offers several innovative tools for taking control of PC and server power consumption, determining energy savings and reporting on the energy performance of building management, equipment and IT devices.

Lenovo PCs come with built-in energy-efficiency tools and eco-friendly features that include:

- For recent Windows systems, the "Lenovo Settings" app — provides power management features for the user (i.e., Connected Standby).
- Adaptive Thermal Management adjusts system power and fan speeds based on ambient levels.

- Active Directory and LANDesk<sup>®</sup> supports remote deployment of power schemes and global settings to allow administrators the ability to control and enforce ThinkPad<sup>®</sup> energy savings company-wide.
- Lenovo EasyResume gives quick recovery from computer lid close, balancing low power state by suppressing CPU usage at lid close.
- Intelligent Cooling balances thermal performance to adjust settings to provide a cooler surface for comfort while optimizing product energy performance.

Lenovo servers come with built-in energyefficiency tools and eco-friendly features that include:

- For the ThinkServer management model, the "New Customer WebUI" app — provides power management features for the user.
- For the ThinkServer management model

   supports remote deployment of power schemes and global settings to allow administrators the ability to control and enforce ThinkPad<sup>®</sup> energy savings companywide.
- For other operating systems, Power
   Manager<sup>™</sup> helps optimize energy used by a running machine and saves up to 30 percent on energy consumption.
- Lenovo ASHRAE Management adjusts processor and fan speeds based on ambient levels.
- Rack Planner helps users better plan for rack efficiency by increasing rack density and calculating power consumption based on specific configurations.
- Smart Grid helps users monitor and manage the power consumption and temperature of ThinkServers with Intel Node Manager. Smart Grid can save power, increase rack density and avoid data center hotspots.

- PSU smart-on when the system detects that the power loading is low in redundant PSU configuration, it can transfer the loading from 2 PSU to 1 PSU to get higher power efficiency and save power.
- **Diagnostics** capabilities and Easy OS installation (LEPT) embedded.
- Several System x servers are available with 80 PLUS Titanium<sup>™</sup> server power supplies or PSUs. By improving the efficiency of the server PSUs, energy efficiency improvements can be cascaded up through the data center for both power and cooling.
- Liquid cooling solutions can reduce the facility demands for data center chillers, resulting in facility infrastructure savings.
- Lenovo Efficiency Mode<sup>™</sup> (LEM) works in cooperation with the operating system to fine tune the operating efficiency of the server.
   LEM can boost performance per watt efficiency by up to 11 percent compared to a server that is not using LEM.
- Unused devices embedded in System x servers are either powered down or placed into very low power state automatically during boot time and/or dynamically at run time. Examples of devices where power is intelligently managed include:
  - » CPU cores
  - » Memory channels and DIMMs
  - » PCI Express ports
  - » QPI links
  - » SATA and SAS storage controllers
  - » Network controllers
  - » Serial ports
  - » USB controllers
  - » Voltage regulatory devices (VRDs)

#### **PRODUCT CARBON FOOTPRINT**

Lenovo is engaged with other members of the information and communication technology (ICT) industry and academia in the development of a tool to simplify and expedite determination of the Product Carbon Footprint (PCF) for ICT products through the Product Attribute Impact Algorithm (PAIA) project. This work aims to move the industry toward a standard methodology for establishing PCF. Lenovo's product development groups currently use the PAIA notebook, desktop, monitor, all-in-one and tablet PCF calculation tools, and are engaged in development of a tool for servers and thin clients. PCFs calculated using the PAIA tools are shared with customers upon request. PCFs for typical products and Lenovo's PCF strategy are published on our environmental website.

Lenovo has used the results of the PAIA calculations to identify opportunities to drive reductions in PCF. As an example, based upon PAIA-generated PCF Lenovo developed a new objective and target for FY 2015/16 to identify a product lifecycle state greenhouse gas (GHG) "hot spot" for a high-volume, mainstream product in each of our product business units, and develop and implement a plan for reducing GHG emissions in those areas. After this is accomplished, Lenovo may consider developing specific PCF reduction targets for a mainstream product, from generation-to-generation, which will be determined by the business unit. We will also continue to support the development of more accurate and efficient resources for carrying out PCF calculations.

In China, Lenovo continues our engagement in the development of standards and tools to accurately quantify the lifetime impact of our products. Lenovo's China Standards and Compliance Group is engaged in the Chinese government's development of a product category rule for establishing the product carbon footprint for ICT products. Lenovo has also been actively involved in the following carbon footprint projects:

- Product Carbon Footprint China Standard
- China ICT Product Life-Cycle Assessment Data Service Platform
- IEC Technical Report GHG Quantification
   Methodology for Computers
- China ICT Supporting Low Carbon Economy
- EICC Product Carbon Footprint Data Allocation Algorithm Development

Due to its strong local presence in China, Lenovo is leading advocacy efforts in China regarding energy and carbon standards and policy in the IT products field, and is active in the following energy efficiency and carbon-related workgroups, associations and initiatives:

- China PCF (PCR) Standard Working Group
- China Energy Label Standard and Technical Committee
- China Energy Saving Work Association of Chinese Institute of Electronics
- China ePCF Platform Union and China Energy
   Conservation Program
- China Ministry of Industry and Information Technology Eco-Design Pilot Enterprises Program

In 2014, Lenovo kicked off the Notebook PCF part of the project. Lenovo used the ePCF system for supply chain data collection and product carbon evaluation, calculation and verification. The online ePCF tool and database system was developed by the China Institute for Electronics, Sichuan University, IKE Environmental Technology and Lenovo. After completion of the product life cycle analysis and two rounds of audits, Lenovo received the first consumer Notebook Product Carbon Footprint certificate for the Yoga 3 Pro-1370 based on the PAS2050 and China Product Category Rules. The project strongly supported the establishment of the industry standard "China Notebook Product Category Rules."

Lenovo has also continued to be engaged in the International Electrotechnical Commission (IEC) TC100 Technical Report (TR) Project "Quantification methodology for greenhouse gas emissions for computers and monitors." This TR will provide specific guidance on how to quantify the carbon footprint of computer devices using a methodology consistent with existing guidance documents.

Lenovo, along with EICC, MIT, HP, Seagate and Cisco, has been working on development of product-specific allocation methods that link facility-wide carbon data to the specific product types manufactured within that facility. Please read the results of this project in the paper, <u>Standardizing Methods for Performing Allocation</u> of Supplier Carbon Data for IT Products.

In 2015, in support of Lenovo's EMS objectives and targets and to expand Lenovo's external communications in the PCF area, a format and methodology for displaying PCF results have been developed by using the PAIA tools. All Lenovo products<sup>1</sup> released after July 1, 2015 will have the PCF calculated and disclosed externally on Lenovo's public website. Customers can download the Product Carbon Footprint Information sheet from the website. These information sheets are generated using the streamlined PAIA life cycle analysis and include manufacturing, transportation, use and end-oflife.

Visit the following website to download PCF information sheets: <a href="www.lenovo.com/social\_responsibility/us/en/datasheets\_notebooks/">www.lenovo.com/social\_responsibility/us/en/datasheets\_notebooks/</a>

For more information about Lenovo's work on calculating product carbon footprints, visit <u>www.lenovo.com/climate</u>.

<sup>1</sup> All products: including notebook, desktop, monitor, all-in-one and tablet product categories

#### ENVIRONMENTALLY PREFERRED MATERIALS

Lenovo's product development process is also focused on integrating environmentally preferred materials into our products. Transitioning to low-halogen components where feasible and including post-consumer recycled content (PCC) and post-industrial recycled content (PIC) plastics continues to be instrumental to our development strategy. Lenovo has demonstrated significant leadership in the use of PCC and design of environmentally sustainable products. From early 2005 through 2015, Lenovo's use of PCC and post-industrial recycled content (PIC) plastics in its products exceeded 177 million pounds. Lenovo's use of post-consumer recycled content and post-industrial recycled content plastics in its products has resulted in the avoidance of 83 to 248 million pounds of CO<sub>2</sub> emissions since we began using these materials.<sup>2</sup> Lenovo is committed to incorporating some amount of PCC into every PC product we develop and continuously increasing the use of PCC in each product family.

For more information about Lenovo's use of environmentally preferred materials, visit www.lenovo.com/materials.

#### **PRODUCT PACKAGING INITIATIVES**

Lenovo reduces the overall volume of materials used for packaging by using recycled and recyclable material, smaller-sized boxes and reusable bulk packaging. In 2015, Lenovo continued to refine our many packaging designs. For example, with the ThinkPad X250 packaging design, pallet density was increased from 84 units per pallet to 90.

For more information about our efforts to reduce the environmental impact of our product packaging, visit <u>www.lenovo.com/packaging</u>.

# 5.2 ENVIRON-MENTAL IMPACT OF LENOVO OPERATIONS

#### **OVERVIEW OF OUR FOOTPRINT**

Lenovo's operational footprint spans the globe. Lenovo is incorporated and headquartered in Hong Kong, with operational centers around the world, the largest ones being in Beijing, China, and Morrisville, USA. We also operate research and development (R&D) centers in Yokohama, Japan; Beijing, Shanghai, Xiamen, Chengdu and Shenzhen in China; Essen, Germany; and Chicago and Morrisville, USA. Manufacturing and assembly facilities are in Beijing, Chengdu, Hefei, Huiyang, Shanghai Shenzhen, Wuhan and Xiamen, China; Pondicherry, India; Monterrey, Mexico; Itu, Brazil; Gunma and Yonezawa, Japan; and Greensboro, NC, USA. Sales headquarters are located in Paris, Beijing, Singapore and Morrisville. Further, Lenovo has sales and administrative offices in more than 180 locations in more than 60 countries around the world.

#### Lenovo's Corporate Policy on Environmental

Affairs (see pages 76-77) and Corporate Instruction on Environmental Programs establish baseline environmental requirements for all Lenovo operations and facilities, and are endorsed by Lenovo's Chairman and CEO Yang Yuanqing. In addition, all of our manufacturing and R&D facilities are operated within the scope of our ISO 14001 registered EMS.

Lenovo's significant operational environmental impacts continue to be waste generation, energy consumption and the emissions associated with generation of that energy. <u>Objectives and targets</u> are established annually for our manufacturing and development facilities relative to these environmental aspects (see pages 27-29).

<sup>&</sup>lt;sup>2</sup> Using the conversion factors defined by TCO in its report from April 2014 entitled "<u>Post Consumer Recycled Plastics</u> in <u>IT Products</u>." This avoidance of emissions is not included in Lenovo's GHG accounting as it was realized by our suppliers.

Each Lenovo manufacturing and R&D site is supported by a site environmental affairs focal point, whose role is to ensure proper implementation of Lenovo's EMS and drive the site team to achieve environmental objectives and targets. Similarly, our office and administrative facilities are supported by regional focal points.

As a responsible corporate citizen, Lenovo is proudly committed to demonstrating leadership in environmental affairs in all aspects of our business. Lenovo consistently meets or exceeds applicable regulations around the globe. As part of the effort to continually improve our environmental performance, Lenovo looks for opportunities to exceed customer and legal requirements and reduce our impact on the environment through our participation in numerous voluntary environmental initiatives, as can be seen on pages 82-86.

## ENERGY AND CLIMATE CHANGE

Lenovo recognizes that human activities are contributing to climate change and concurs with the findings of the Fifth Assessment Report (AR5) of the Intergovernmental Panel on Climate Change (IPCC) – "Climate Change 2014." Lenovo also recognizes that if left unchecked, current trends in climate change present serious economic and societal risks and agrees that specific actions are needed to stabilize atmospheric greenhouse gas levels and hold global average temperatures to acceptable increases. Proposed actions supported by Lenovo include:

- Reducing global emissions from 40 to 70 percent between 2010 and 2050, and
- Aligning with the global scientific community's generally accepted recommendations for maintaining global warming below two degrees Celsius over the 21st century relative to pre-industrial levels.

We are working both internally and externally to minimize and mitigate climate risks. Lenovo is committed to continually reducing the global carbon footprint of all of its business activities. Lenovo has demonstrated its commitment by:

- Developing a corporate Climate and Energy Policy,
- Implementing a long-term comprehensive Climate Change Strategy,
- Setting aggressive corporate-wide objectives and targets which support the Policy and Strategy, and
- Showing continual year-to-year progress in achieving those objectives and targets.

In an effort to drive climate actions external to Lenovo's operations, we monitor, support and in some cases participate in the development of voluntary carbon reduction programs, climate change regulations, renewable energy portfolio standards and product carbon footprint and labeling requirements both globally and regionally.

In March 2016, Lenovo's climate policy was updated to acknowledge that the effective management of our climate change impacts is directly linked to the effective management of energy consumption. Our Climate Change Policy has been renamed <u>Climate and Energy Policy</u> and now includes Lenovo's basic commitments to energy management.

Reducing energy consumption and associated carbon emissions is the primary focus of our climate change programs and strategy. Management of energy and carbon emissions reduction activities and programs is carried out within the scope of Lenovo's global EMS. Lenovo is achieving its energy and carbon management goals through improvements in operational and logistical energy efficiency, reductions in energy consumption, switching to renewable energy sources where practicable, supporting an increase in renewable energy available via the grid, and purchasing renewable energy credits and carbon offsets. Over the past several years, Lenovo has experienced amazing growth. Growth in infrastructure, organization and product sales has made it especially challenging to stay on track to meet our climate-related goals. We overcame these challenges by engaging internal teams and external partners to identify opportunities to reduce energy consumption and carbon emissions. The identified opportunities were then subjected to a project approval hierarchy that favors energy efficiency first, use of renewable energy second, and finally, the purchase of renewable energy credits or carbon offsets. This process continues to lead to the identification and implementation of projects that support Lenovo's goal of maintaining a sustainable balance among social, economic and environmental impacts.

Visit <u>www.lenovo.com/climate</u> for more information on Lenovo's climate change policy, strategy, objectives and targets.

#### CO<sub>2</sub>-neutral electricity consumption at MEDION Lenovo

In January 2016, MEDION Lenovo committed to ensuring its electricity consumption is  $CO_2$ -neutral to mitigate our climate change impact and conserve valuable resources. For this purpose, MEDION Lenovo will purchase 2,500,000 kWh of renewable energy on a yearly basis corresponding to the amount of electricity we consume annually. The purchased energy will originate from 100 percent renewable and  $CO_2$ -neutral energy sources. In line with European and national legislation, the energy will be certified by a Guarantees of Origin issued by the German Umweltbundesamt (Federal Environmental Agency).

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## OPERATIONAL ENERGY EFFICIENCY

Given that one of Lenovo's most significant environmental aspects is emissions associated with energy consumption, Lenovo's goal is to continually improve the energy efficiency of its operations. Lenovo initiatives for energy reduction include activities such as installation of low-energy lighting and related electrical equipment, energy-efficiency improvements to HVAC systems, eliminating or improving usage of transformers and air compressors, manufacturing area optimization, manufacturing-line optimization, improving computer server room energy efficiency, consolidation of operations, and employee education.

For more information on our performance relative to energy efficiency, please see the section <u>the Energy Reductions in Operations section</u> on page 101.

## RENEWABLE ENERGY

Lenovo is committed to installing local renewable energy generation sources where feasible. In support of this commitment we continue to expand our use of onsite solar energy. We currently have solar hot water generation at Beijing and Huiyang and solar electric generation at Beijing and Shanghai. A solar electricity project has been approved for the Lenovo Compal Future Center in Hefei, China and the Development Drive R&D center in Morrisville, USA. A similar project is planned and awaiting approval at Lenovo's site in Xiamen, China. Combined, these solar installations represent over 10 MW of solar electric generation capacity. This provides an annual reduction in GHG emissions in excess of 9,000 metric tons of CO<sub>2</sub>e. The U.S. Environmental Protection Agency (EPA) recognized Lenovo for green power purchase. In 2015, Lenovo was again recognized by the U.S. EPA as a Top 30 Tech & Telecom Green Power Partner. Please click here for more information: www.epa.gov/greenpower/green-powerpartnership-top-30-tech-telecom.

## RENEWABLE ENERGY CREDITS AND CARBON OFFSETS

Where actual direct energy reductions or use of renewable energy sources are not technically or economically feasible, Lenovo chooses to purchase Renewable Energy Credits (REC), Renewable Energy Guarantees of Origin (REGO) and carbon offsets.

Lenovo partnered with ClimeCo and purchased carbon offsets to carbon balance 54,000 MT  $CO_2e$ , Green-e Energy certified RECs with an offset value equivalent to 22,700 MT  $CO_2e$  and REGO with an offset value equivalent to 2,590 MT  $CO_2e$ .

Carbon offsets, REGOs and RECs supported 100 percent renewable energy projects in China (wind and small hydro), Europe (solar) and the United States (wind).

To view the certificate for RECs, REGOs and carbon offsets retired by Lenovo in 2016, visit: <u>www.lenovo.com/climate</u> and follow the links from there.

## CLIMATE CHANGE RISK/OPPORTUNITIES MANAGEMENT

Climate change risks and opportunities are identified and evaluated as part of two processes within Lenovo's business management systems. These include our global annual risk registration process and our annual environmental significant aspect evaluation. These two processes are connected, meaning that if climate change risks are identified in the global risk registration, they are considered in the environmental aspects analysis — and vice versa.

- Lenovo's formal risk management process includes, among other sustainability factors: environmental risk categories such as environmental incidents, catastrophic weather conditions, supply chain disruptions due to electricity outage, and other elements. Each business unit is required to annually identify risks and assess their impacts on Lenovo's strategy execution, then develop mitigation plans for the risks identified. This process is managed by Lenovo's Enterprise Risk Management team.
- 2. Climate change risks are also evaluated, and the results of this evaluation are considered in the annual risk registration process described above. Energy consumption, the associated greenhouse gas emissions and climate change are identified as significant environmental aspects and impacts for Lenovo. As such. associated risks and opportunities are evaluated and prioritized annually, based on Lenovo's significant aspect methodology in accordance with the requirements of our environmental management system. Per these requirements, climate change is evaluated relative to its actual and potential influence on the environment and the business. This process is managed by Lenovo's Global Environmental Affairs team.

As a demonstration of Lenovo's long-term approach to risk management in this area, in May 2014, Lenovo's Board of Directors (BOD) and Executive Committee (LEC) acted to increase Lenovo's GHG emissions reduction commitment from 20 percent to 40 percent by FY 2020/21, relative to FY 2009/10. We will meet this commitment through investment in onsite renewable generation, energy efficiency and renewable energy credits or offsets.

In further support of Lenovo's emissions reduction commitment, in May 2015, the BOD authorized the establishment of a target for Lenovo to achieve 30MW of owned or leased renewable energy generation capacity globally by 2020.

## SUPPLY CHAIN MANAGEMENT

Lenovo is committed to corporate social responsibility and sustainability across the end-to-end supply chain process. This includes processes and employees at Lenovo manufacturing and non-manufacturing locations, at outsourced manufacturers and in procurement and logistics processes. We are focusing on compliance with all applicable labor, environmental, health and safety, and ethics standards; reducing greenhouse gas emissions; mitigating environmental risk and avoiding the use of materials mined in regions where their profits could contribute to conflicts. We are steadily widening the scope and deepening the extent of our policies, programs and oversight activities. Environmental highlights from our supply chain management teams are included below. Additional supply chain highlights are included in the People and Performance sections of this report.

## MINIMIZING THE ENVIRONMENTAL IMPACT OF LENOVO'S LOGISTICS

Lenovo plans to continue optimizing our logistics programs and working closely with our partners to ship products in the most environmentally responsible manner. Lenovo has established a product transportation carbon emissions baseline for FY 2011/12 and since then has been working to improve the data collection process and increase carriers' coverage in the baseline through the use of a web-based carbon dashboard. Lenovo's Scope 3 emissions can be viewed on page 103.

Global Logistics continued to launch a series of pallet optimization projects in FY 2015/16 to reduce CO<sub>2</sub>e emissions associated with logistics. These included:

- Beginning in April 2015, the Lenovo logistics team implemented a project to recycle inbound pallets for use in outbound loose carton air shipments at the Lenovo Shenzhen plant. This project is estimated to reduce approximately 480 MT CO<sub>2</sub>e annually.
- The Lenovo logistics team worked with Lenovo's R&D team to develop a new lighterweight pallet for air shipments weighing approximately 9.8kg. This pallet was implemented at the Lenovo Shenzhen plant in March 2016. In 2016, this project will be expanded to all Lenovo original design manufacturer (ODM) sites. Once implemented, it is estimated that this initiative will reduce approximately 6,595 MT CO<sub>2</sub>e per year.

Lenovo's Global Logistics team proactively drives ocean-transport consolidation opportunities to reduce the number of containers shipped out of China manufacturing sites with the goal of reducing carbon emissions.

In Asia Pacific, Lenovo is a founding member and board member of Green Freight Asia (GFA). This nonprofit association's goal is to promote and improve fuel-efficient freight transport and decrease air pollution in Asia. Lenovo China established a China domestic transportation carbon footprint baseline for FY 2013/14 from April 2013 to March 2014. In 2015, Lenovo received the GFA Label Leaf Level ONE that recognizes Lenovo's Green Road Freight practices as a shipper.



## UNDERSTANDING GREENHOUSE GAS EMISSIONS, WATER USAGE AND WASTE GENERATION IN OUR SUPPLY CHAIN

Lenovo continues to drive for accurate reporting of greenhouse gas emissions, water usage and waste generation across our supply chain. We ask our suppliers every year to formally provide their environmental impact data via either the EICC or the <u>CDP</u> reporting methodologies and platforms. We should note that suppliers representing 73 percent of our procurement spend report via CDP and have formal CDP performance ratings.

In FY 2015/16, suppliers representing 95 percent of our procurement spend reported total Scope 1 and 2 emissions, water and waste. While our total emissions have remained generally constant over the past three years, our company revenue has increased 80 percent and shipments have nearly doubled. Last year our total GHG emissions increased about 24 percent from the previous three years' average emissions. However, this was due to two large corporate acquisitions (System x and Motorola Mobility). More importantly, our emissions per unit of revenue and shipments did not increase. Our emissions per unit of revenue and per unit of product have decreased about 31 percent over the past four years, even with Lenovo's significant business volume growth.

Other key statistics:

- 96 percent of suppliers have GHG reduction goals (three percent increase from previous year)
- 81 percent of suppliers have formal third-party verification of their emissions reductions
- 75 percent of suppliers have water and waste reduction goals
- We received "Limited Assurance" certification, which is the highest level of available third-party verification from Bureau Veritas

With respect to water usage and waste generation, the reporting volumes did show an increase. Since this is just the second year of reporting, suppliers are still improving their ability to precisely measure usage and amounts. We know from past experience dealing with the early reporting years of GHG emissions that capturing 100 percent of supplier operational activity across multiple facilities and measuring it properly is a challenge. However, we are confident that we now have a much better baseline upon which to track overall environmental impact of water usage and waste generation.

In FY 2015/16 we established and communicated formal targets for suppliers where top ratings require annual reductions of three percent or better, publicly reported reduction goals, CDP scores of 90 or better and independent verification. These indicators will become part of a larger master supplier scorecard to identify the best and least performing suppliers.

Details on supplier carbon emissions are included later in this report under GHG Emissions Performance in section E., entitled <u>Additional</u> <u>GHG Emissions Performance and Related</u> <u>Initiatives</u>.

## GLOBAL REAL ESTATE OPERATIONS

#### LENOVO'S CHINA REAL ESTATE

Lenovo's China Property (CP) function is responsible for managing all office real estate activities and meeting Lenovo's real estate needs in China.

As of March 2016, CP managed nine Lenovoowned sites in China with a total of 820,000 square meters. Additionally, the total leasing real estate portfolio represented 250,000 square meters across 51 locations in China.

Energy efficiency was a key target of Lenovo's CP team throughout FY 2015/16.

We repaired the refrigeration unit in our New Building R&D Campus in Beijing, investing approximately RMB 600,000. This project increased the unit's working efficiency by two percent as well as improved its reliability. We also invested in optimizing the energy use of electric motors in the San Biao Building in Beijing. Our investment resulted in a two percent energy consumption reduction.

#### LENOVO'S REAL ESTATE OUTSIDE OF CHINA

In FY 2015/16, the Real Estate and Workplace Solutions (REWS) team continued to drive innovation in creating a workplace that is productive for our employees and more sustainable for our planet. Throughout the year we focused on helping Lenovo achieve our 2020 sustainability goals through better site selection, environmental performance and workplace design.

Our activities in FY 2015/16 were impacted by the continuing integration of the System x server business and Motorola Mobility into the Lenovo portfolio. Many of the newly acquired sites feature energy-intensive IT infrastructure such as R&D server labs, representing a new challenge for the Lenovo team. Throughout integration, sustainability has stayed at the forefront of our planning and implementation.



San Biao

## The Pioneering Achievement in Lenovo: Lenovo's first facilities to be ISO 50001 certified.

### The Team Behind It:

EMEA (Europe, Middle East, Africa) Real Estate & Workplace Solution (REWS) team

#### The Story:

In FY 2015/16, Lenovo's 37 sites in 22 EU countries were the first in the company to be certified to ISO 50001, the standard for establishing, implementing, maintaining and improving an energy management system. This certification was the result of arduous efforts of Lenovo's EMEA REWS team.

In 2009 the European Union (EU) set greenhouse gas emission and energy targets for 2020:

- 20 percent reduction in greenhouse gas emissions (from 1990 levels);
- 20 percent of EU energy from renewable; and
- 20 percent improvement in energy efficiency.

In 2012 the EU's Energy Efficiency Directive established binding measures for helping the EU to reach those targets.



To adhere to the Directive and actively support the EU's energy and climate targets, in early 2015 the EMEA REWS team decided to implement an energy management system (EnMS). By June an energy management team had been assembled, and in August the Lenovo EU Energy Policy was proposed and approved, and became effective in September. Each manager, employee and contractor performing work on behalf of Lenovo is expected to follow this policy.

After much training and months of hard work, Lenovo's <u>European Union ISO 50001</u> <u>Certificate</u> (and 33 subsidiary certificates) was issued in December 2015.

Certification is not the end of story, but the start of the next chapter. With our new EnMS we expect to improve Lenovo's EU energy performance, reduce our greenhouse gas emissions and lesson other related environmental impacts. We look forward to each EU office's contribution to identifying new areas where Lenovo can better manage and eventually reduce its electrical and natural gas consumption.



Our sustainability approach is focused on choosing the right sites, enhancing the environmental performance of our operations and improving workplace design. This approach helps us limit our exposure to environmental risks, lower our environmental footprint and create value for our clients, employees, communities and shareholders.

We prioritize office attributes that meet our business, environmental and social objectives when we choose a site.

In North America, the RTP Development Drive campus continues with major renovation work. The primary addition is the Building 6 North America Sales Center. The NA Sales Center will be will be LEED Platinum certified for interiors. This is a large location of mainly 400 early-career employees working in an open floor plan that utilizes state-of-the-art design. The major server labs at the Development Drive campus continue to see exceptional energy savings. The Building 7 chiller plant is being reworked so the site will continue to meet energy consumption targets even with the addition of 30,000 square feet of PC labs.

At the Think Place campus the problem of outside air rushing in from the courtyard building entrances has been resolved with the addition of vestibule doors. This will result is major heating and cooling savings on the first floor. This issue had been initially identified as a concern in an employee survey.

In EMEA, we implemented an Energy Management System at all the European Union sites and delivered significant improvements to major facilities, including Bratislava, Paris and Stuttgart.

Thirty-seven Lenovo sites across EMEA have been awarded ISO 50001 certifications for energy management systems, showcasing Lenovo's commitment to increasing energy efficiency, reducing costs and improving environmental performance. ISO 50001 integrates energy performance into organizational management practices, helping companies continuously improve their energy efficiency. Through certification, Lenovo is working to reduce energy costs while lowering greenhouse gas (GHG) emissions and other environmental impacts. Certification also supports EU Energy Efficiency Directive requirements, helping Lenovo contribute to the EU's 2020 goal of increasing energy efficiency by 20 percent.

Digital Park I, a building leased by Lenovo in Bratislava, has achieved LEED Platinum (LEED O+M: Existing Buildings v3 - LEED 2009), the highest possible certification level, in the category of LEED Existing Buildings: Operations & Maintenance. It is the very first building in Central and Eastern Europe (CEE) to have received the highest level in this category, while in all of Europe there are only nine buildings in total (seven in Germany, one in Italy and one in Sweden). This success could not have been achieved without the improvements made by Lenovo in the Building Management System.

In Paris, we moved to the Green Office® building which is adapted to the bioclimatic conditions of the site (climate, sunlight, orientation) in order to significantly cut energy consumption. In Stuttgart, Lenovo offices in the Enterprise Briefing Center were moved to a Silver DGNBawarded (DGNB is the German Sustainable Building Council) building, where fulfillment of up to 50 sustainability criteria was certified.

In Latin America, we installed high-efficiency cooling and lighting at our R&D lab and server rooms in Campinas, Brazil. In Lenovo's Brazil operations we took several measures to reduce energy consumption in industrial and office environments, including training, effective action to control air conditioning system drive hours, routine inspections, internal communications and volunteer actions. We implemented a system for water reuse which reduced consumption equating to 80 percent per month. Additionally, we conducted environmental education at a local university (UNISO), organized conferences on the importance of the life cycle of electronic products and held a reverse logistics competition where 20 students disassembled Lenovo notebooks to identify the percentage of recyclable parts and the correct method to dispose of components. We also selected a new site in São Paulo, which is in the process of pursuing LEED Certification.

In Malaysia, activities included recycling drives and replacing fluorescent tubes with LED lighting. Programs to encourage more sustainable behavior including setting the default for all new employee computers to double-sided printing. There was also an initiative to reduce energy consumption by turning off lights when not in use. All lights in the office are now switched off after 11 p.m. by a security guard, and the receptionist switches off lights at the reception, partial walkways and logo display before leaving the office.

In Australia and New Zealand, sites participating in CitySwitch (a program to improve office energy and waste efficiency) in 2013 and 2014 achieved a 4.5 NABERS rating (NABERS is an Australian rating system for the environmental performance of buildings). A 4.5 NABERS rating puts Lenovo in the top 10 percent of green offices in Australia. Lenovo became a signatory to the Australian Packaging Covenant (APC), and received a sustainability award from the NSW (New South Wales) Business Chamber in 2014. Switching to a new energy provider in 2015 resulted in reduced greenhouse gas emissions, water consumption and solid waste in FY 2015/16.

Motorola added LEED Certified sites in Chicago and Sunnyvale, CA, to the Lenovo portfolio. The sites demonstrate Motorola's industry-leading commitment to environmentally sustainable and innovative workplace design. In FY 2015/16, we completed the rollout of our environmental data collection software Credit360 across all regions. We utilize the software to increase our environmental monitoring, enhance our management capabilities, further understand the needs of our sites and identify opportunities to improve local environmental performance.

We look forward to making further strides in FY 2016/17. REWS is committed to making continued improvements to the quality of the workspace interiors, indoor environmental quality and energy efficiency of our facilities.

## FY 2015/16 ENVIRONMENTAL PERFORMANCE

#### **ENERGY REDUCTIONS IN OPERATIONS**

Improving operational energy efficiency is a fundamental element of Lenovo's strategy to meet its GHG reduction targets. Since establishing climate change objectives and targets, Lenovo has implemented more than 130 operational energy-efficiency projects worldwide. All sites continue to strive to identify and implement energy-efficiency projects and evaluate the opportunity to employ the use of renewable energy. Throughout the organization, these activities are driven by site energy champions who lead energy teams that help implement energy reduction projects.

During FY 2015/16 Lenovo approved approximately 30 new energy-efficiency projects. Some of the projects implemented during the year included:

**Fuel** 

- Solar hot water installation for phase I of Lenovo's new headquarters building in Beijing, Phase II will include similar solar hot water capabilities.
- Installation of LED panels and LED tubes at locations in Panningen, Netherlands; Essen, Germany; and Beijing and Shanghai, China.
- Intelligent light controllers in Wuhan and Beijing, China.
- Improvements in HVAC efficiency at Chengdu, Hefei and Shenzhen, China.
- Installation of energy-efficient, tankless water heaters in Essen, Germany.

All totaled, the approved projects will generate approximately US\$740,000 in savings per year and reduce energy consumption by 4,600 MWh annually. It is estimated that the total annual CO<sub>2</sub>e savings will be over 3,226 MT CO<sub>2</sub>e.

#### **ENERGY CONSUMPTION**

Lenovo's direct and indirect energy consumption by primary energy source for FY 2015/16 is detailed in Figures 5.1 and 5.2 below.

Figure 5.1 Energy Consumption by Primary Energy Source

Energy Type	GJ
Fuel	120,107.39
Electricity	1,035,664.26
Steam	83,097.04
Cooling	8,137.37
TOTAL	1,247,006.06

Figure 5.2 Direct Energy Consumption by Source (Fuel Detail)

GJ

Gas/diesel oil (stationary combustion)	3,959.04
Natural gas (stationary combustion)	106,018.25
Liquefied petroleum gas (LPG) (stationary combustion)	5,661.00
On road diesel fuel (mobile combustion)	1,015.47
Gasoline/petrol (mobile combustion)	1,962.16
Liquefied petroleum gas (LPG) (mobile combustion)	534.49
Compressed natural gas (CNG) (mobile combustion)	0.54
Jet kerosene fuel	956.44
TOTAL	120,107.39

#### **GHG EMISSIONS PERFORMANCE**

Lenovo reports GHG emissions and tracks performance relative to our fiscal year, which runs from April 1 through March 31. Lenovo's GHG objectives and targets are set and tracked relative to a base year of FY 2009/10.

#### A. Lenovo's Global Scope 1, 2, 3 GHG Emissions

Lenovo's Scope 1 and 2 (location-based)  $CO_2e$ Emissions Inventory from our base year is detailed in Figure 5.3. Lenovo's Scope 3  $CO_2e$ Emissions Inventory from our last seven fiscal years is detailed in Figure 5.4. The table in the Consolidated Metrics section of this report includes Scope 1, 2 (location- and market-based) and 3 emissions for Lenovo's global operations.

Note: Lenovo started to report location- and market-based Scope 2 from FY 2015/16 to comply with the GHG Protocol Scope 2 Guidance.



<sup>1</sup> Scope 1 GHG emissions are calculated based on the purchased quantity of commercial fuel and using published emission factors from DEFRA, U.S. EIA, EPA and 2006 IPCC Guidelines for National Greenhouse Gas Inventories. The guidance from worksheets of World Resources Institute's, *GHG Protocol Tool for Mobile Combustion* and the *GHG Protocol Tool for Stationary Combustion*, were used for making the calculations. The tools and guidance were developed by World Resources Institute (WRI) and

copyrighted. They are available at <u>www.ghgprotocol.org</u>.

Scope 2 GHG emissions are associated with the purchase of electricity from the grid and steam. Information on emissions from all Lenovo non-retail facilities worldwide is included in this report. For facilities solely owned or operated by Lenovo, emissions were calculated using actual quantities of purchased electricity and steam and the international emission factors for the relevant country or region (provinces in China, states in the USA). Lenovo emissions from shared facilities were calculated using the floor area occupied by Lenovo and international electricity emission factors for the relevant country. World Resources Institute's, GHG Protocol Tool for Stationary Combustion, was used as guidance for calculating emissions associated with purchased electricity. The Similar Building/Facility Estimation Method was used for facilities that are partially occupied by Lenovo operations.

\* At the end of FY 2012/13 Lenovo adjusted its historical  $CO_2e$  emissions data to account for the acquisition of Medion in Germany and our joint venture with NEC in Japan. At the end of FY 2015/16 Lenovo adjusted historical  $CO_2e$  emissions data to account for acquiring System x and Motorola Mobility.



- <sup>2</sup> Scope 3 GHG emissions are estimated based on the guidance of the Greenhouse Gas Protocol's Value Chain (Scope 3) Accounting and Reporting Standard and its supplement named the Greenhouse Gas Protocol: Technical Guidance for Calculating Scope 3 Emissions (version 1.0).
- <sup>a</sup> Product transportation emissions include key downstream suppliers representing majority of global logistics spend.
- <sup>b</sup> Emissions from waste include nonhazardous waste, hazardous waste and wastewater from all manufacturing and R&D locations. No product waste is included.
- <sup>c</sup> Emissions from purchased goods and services include suppliers covering 95 percent of direct global suppliers spend.
- <sup>d</sup> Emissions from fuel-and-energy related activities include transmission and distribution losses from worldwide used electricity and natural gas.
- <sup>e</sup> Lenovo used the current Product Attribute Impact Algorithm (PAIA) notebook, desktop, monitor, tablet and all-in-one tool for calculating emissions of Lenovo's typical notebook, desktop, monitor, tablet and all-in-one. The calculated results show emissions distribution by different parts and also for use, packaging, transportation and end-of-life treatment categories. The emissions associated with use and end-of-life treatment of sold products were estimated on a "narrow" baseline for the typical notebook, desktop, monitor, tablet and all-in-one multiplied by sold/shipped product volumes.
- <sup>f</sup> Emissions from capital goods were estimated based on capital goods purchased in a given year. All capital goods were converted to the common currency unit and categorized to align with industry codes. Emission factors for different type of capital goods were taken *from 2012 Guidelines to Defra GHG Conversion Factors for Company Reporting*,
  Annex 13 adjusted for inflation rate and exchange rate.

# Figure 5.5 Lenovo's GHG Emissions Inventory Specifics

Base Year	FY 2009/10	April 1, 2009 - March 31, 2010
	Organizational	Operational control approach
Boundary	Operational	Scope 1, 2 and 3 in worldwide manufacturing, research & development sites and office locations
	Scope 1 (direct GHG emissions)	On-site fuel combusted, operation of controlled vehicles and fugitive emissions
	Scope 2 (indirect GHG emissions)	Purchased electricity and steam
Scope	Scope 3 (other indirect GHG emissions)	Business travel, product transportation, employee commuting, emissions from waste, purchased goods and services, fuel- and-energy related activities, use of sold products, end-of- life treatment of sold products and emissions from capital goods
Greenhouse Gases	All GHG covered by the Kyoto Protocol	$CO_2$ , SF <sub>6</sub> , CH <sub>4</sub> , N <sub>2</sub> O, HFCs, PFCs and NF <sub>3</sub>

<u>Click here</u> to see more of Lenovo's global environmental data.

Although Lenovo experienced a slight organic decline in emissions, the impact of structural changes (acquisitions of Motorola Mobility and System x) increased Lenovo's Scope 1 and 2 absolute emissions during FY 2015/16. Lenovo emissions inventory normalized by total revenue and employee population increased in comparison with the previous year. However, Lenovo's emissions intensity improved when measured against floor area and remained flat against unit of production.

Overall Scope 3 emissions remained flat (increased by less than 0.1 percent). Lenovo's reporting categories included: business travel, emissions associated with product transportation, site waste, employee commuting, purchased goods and services, fuel-and-energy related activities not included in Scope 1 or 2, emissions from use of products, emissions from end-of-life of products and emissions from capital goods. Please see section E. Additional GHG Emissions Performance and Related Initiatives for information on Lenovo's actions to drive down supplier and transportation emissions.

#### B. Lenovo's Global Scope 1 and 2 (locationbased) GHG Emissions by Country

Lenovo's Scope 1 and 2 (location-based) breakdown by country for FY 2015/16 is detailed in Figure 5.6.

Figure 5.6 Lenovo's GHG Emissions (MT CO<sub>2</sub>e) - Scope 1&2 (location-based) - by Country<sup>3</sup>

Country	Country Total Scope 1	Country Total Scope 2 (location-based)
Brazil	474.14	2,111.05
China	3,904.16	175,102.84
Germany	441.60	1,764.50
India	81.97	4,399.98
Japan	324.05	5,982.48
Mexico	101.71	3,436.61
Taiwan	0.00	1,906.53
United States	1,278.68	29,090.31
Rest of World	461.33	4,698.77
TOTAL	7,067.64	228,493.06

<sup>3</sup> Brazil, China, Germany, India, Japan, Mexico, Taiwan and United States represent manufacturing and R&D sites in these countries. "Rest of World" represents all real estate sites across the world (small and large – except the ones in regions listed above).

#### C. Lenovo's GHG Emissions Objectives and Targets

Lenovo's first and second milestones of reducing Scope 2 emissions by 10 and 13 percent relative to FY 2009/10 and offsetting or eliminating all Scope 1 emissions were achieved by March 31, 2011 and 2013.

We closely evaluated our interim reduction targets of 16 percent and 20 percent by 2020 and followed Lenovo's Executive Committee and Board of Directors' direction to increase our target for Scope 1 and 2 GHG emissions officially from 20 percent to 40 percent by 2020 relative to our FY 2009/10 baseline at the beginning of FY 2015/16. This second generation target for GHG emission reductions aligns with our customers and investors' expectations and follows the latest scientific findings of climate science. During FY 2015/16 Lenovo achieved a 22 percent emissions reduction relative to FY 2009/10. The Scope 1 and Scope 2 reductions were accomplished by implementing energy efficiency projects (over 30 new projects such as installing low energy lighting, improving the efficiency of air conditioning systems and optimizing production processes), consolidating operations between existing and newly acquired sites, using solar sources at sites (solar panels in Shanghai, China) and purchasing renewable energy certificates from renewable projects in the United States and Renewable Energy Guarantees of Origin in Europe.

Although in FY 2015/16 we were on track to reduce our Scope 2 emissions by 20 percent relative to FY 2009/10 by 2020, in May 2014, Lenovo's Board of Directors approved a significant increase in Lenovo's emission reduction target from a 20 percent to a 40 percent reduction for combined Scope 1 and 2 emissions relative to a FY 2009/10 baseline. Lenovo officially adopted this new emissions reduction target of 40 percent for FY 2015/16 starting April 1, 2015. In May 2015, Lenovo's Board of Directors endorsed an additional target of 30 MW of Lenovo owned or leased renewable energy generation capacity globally by 2020. This new goal will help us increase our renewable energy installation portfolio worldwide. New projects to support the renewable energy and emissions reduction targets will be announced as they are finalized.

Lenovo's climate change objectives and targets as of April 1, 2015 are displayed in the below graphic:



#### Notes

Scope 3 categories in orange are tracked and evaluated and in some cases actions are being taken to drive emissions reductions Scope 3 categories in blue haven't been tracked and evaluated yet Scope 3 categories in grey are not relevant to Lenovo Energy and GHG emissions data for all seven years included in our reporting (beginning with the baseline year FY 2009/10) was third-party verified. <u>Click here</u> to view the FY 2015/16 GHG Verification Statement, or visit <u>www.lenovo.com/climate</u> and follow the link from there.

Lenovo began disclosing GHG emissions, climate change strategies and climate change risks and opportunities assessments through the voluntary public reporting system — CDP (formerly Carbon Disclosure Project) in 2009. Lenovo's annual GHG disclosures are publicly available at <u>www.cdp.net/reports</u>. The CDP disclosure includes considerations for the financial implications of climate change to Lenovo, which are quantified to the best of our ability based on current information.

Lenovo achieved a CDP 2015 disclosure score of 100 (out of a possible 100), which assessed the quality and comprehensiveness of Lenovo's carbon reporting. In addition, CDP placed Lenovo in the performance band B (out of the following bands: A, A-, B, C, D and E), which evaluated Lenovo's actions on combating climate change such as climate change mitigation, adaptation and transparency. Lenovo committed to action on climate action as a signatory of the We Mean Business initiative, a coalition of businesses and investors supporting a transition to a low carbon economy.

Also, Lenovo signed the American Business Act on Climate Pledge, joining more than 60 companies supporting global climate change actions at the COP21 climate change agreement in Paris.

#### D. Emission Trading System

Lenovo was selected for a pilot emission trading system in China. It was determined by the Beijing Municipal authority in 2013 that Lenovo Beijing, as a significant energy consumption enterprise (consuming more than 5,000 MT coal-equivalent electricity - CO<sub>2</sub> emissions of over 10,000 MT/year), must meet an emissions trading requirement and emissions reduction of two percent year-to-year for Lenovo Beijing sites. Our Shenzhen server plant is also listed as a significant carbon emission enterprise, but its released emissions do not exceed allocated allowances so reductions are not required. The pilot emissions trading scheme is currently in a trial period through the end of 2016. At that time, China will impose a nationwide mandatory carbon trading regimen. Lenovo is closely monitoring other provinces where this pilot program has been imposed since our sites in Shanghai, Huiyang, Xiamen, Chengdu and Wuhan could be impacted in the future.

Lenovo receives a Corporate Sustainability Award at the CDP China Report launch event in Beijing in November 2015. Lenovo has a climate and energy policy and strategy in place and works on meeting the regulatory requirements of reducing emissions two percent year-by-year for our Beijing sites. The main activities include: establishing a comprehensive energy/carbon system for Beijing sites, including energy efficiency and renewable project identification and implementation (e.g., optimizing equipment controls on our production lines, installing energy-efficient lighting systems, installing solar hot water systems), implementing energy verification and energy management audits, and purchasing carbon offsets. This is the third year for Lenovo to be a part of this scheme and since our business is developing constantly, we are anticipating the need to purchase offset allowances. The above-mentioned energy efficiency projects will help us meet the emissions reduction requirements. Additionally, Lenovo partnered with China Reach Academy of Environmental Sciences on the "Cleaning Production Program" that will take place in all locations in Beijing during 2016 and will focus on identifying energy savings opportunities and eliminating waste generated in our manufacturing/assembling operations.

#### E. Additional GHG Emissions Performance and Related Initiatives

#### End-of-Life:

We estimated<sup>4</sup> that Lenovo avoided more than 51,000 MT  $CO_2$ e thanks to recycling end-of-life electronic products in FY 2015/16.

#### Suppliers:

Lenovo continues to fully implement the EICC Environmental Reporting Initiative or the CDP reporting tool for top Tier 1 suppliers. Based on our suppliers' Scope 1 and 2 GHG emissions reported for 2014, it was estimated that the emissions allocated to Lenovo from 95 percent of our direct spend (79 key suppliers) was approximately 1,646,000 MT CO<sub>2</sub>e. During the current reporting period, 96 percent of our procurement spend had specific GHG reduction targets/goals which were achieved via implementing energy efficiency projects and/or renewable projects. However, due to business growth and adding new suppliers from our acquired businesses, Lenovo's overall supplier emissions increased.

#### Transportation:

During FY 2015/16, Lenovo continued collecting and calculating product transportation emissions data via DHL's carbon data dashboard. Emissions from air, ocean, road and rail from international transport and multiple local carriers in China were estimated based on the shipment data received from key Lenovo carriers, which represent the majority of worldwide global logistics spend. Plans for future work in this area include: expanding emissions data collection to additional key suppliers, assessing the correlation of costs and emissions, and closely examining upstream transportation and distribution emissions.

#### Fuel-and-Energy Related Activities:

Lenovo included transmission and distribution (T&D) losses from electricity and natural gas used worldwide in the category "Fuel-and-energy related activities (not included in Scope 1 or 2)." T&D loss rates for electricity by country listed in the World Bank database and natural gas loss mentioned in the ENERGY STAR® Performance Rating document were used for final emissions calculations.

<sup>&</sup>lt;sup>4</sup> The U.S. Environmental Protection Agency Waste Reduction Model (WARM, March 2015) emission factor of 2.51 MT CO<sub>2</sub>e per short ton was used for the estimate – https://www.epa.gov/warm/versions-waste-reductionmodel-warm#WARM Tool V14
# OPERATIONAL WASTE MANAGEMENT

#### MANAGING NONHAZARDOUS SOLID WASTE

One of Lenovo's primary environmental objectives for operational facilities involves minimizing solid waste and maximizing recycling and reuse. Lenovo manufacturing and R&D facilities, and some large office locations worldwide, achieved a reuse/recycling rate of 87.2 percent during FY 2015/16. Detailed below is the generation of solid waste during the last seven fiscal years and disposition of solid waste in FY 2015/16 from these facilities.

#### MANAGING HAZARDOUS WASTE

Lenovo operations generate minimal quantities of hazardous waste. Hazardous waste generated at operational facilities includes oils, coolants, organic solvents, batteries, fluorescent light bulbs and ballasts. All are disposed of in accordance with local environmental regulations with reputable vendors who are approved through a stringent Lenovo audit process. During FY 2015/16, Lenovo neither imported nor exported any hazardous waste. During this reporting year, there were no significant spills. The hazardous waste volume decreased significantly in comparison with the previous year due to a one-time disposal event associated with the closure of facilities in Brazil during FY 2014/15.



# Figure 5.8 Nonhazardous Waste Disposition (Metric Tons)





The FY 2015/16 waste data was third-party verified. <u>Click here</u> to see the FY 2015/16 Waste Verification Statement, or visit <u>www.lenovo.com/WaterandWaste</u> and follow the link from there.

# OTHER ENVIRONMENTAL ASPECTS

#### WATER RESOURCES

Lenovo's manufacturing and product development operations do not have any wet processes. Since Lenovo withdraws water only from municipal sources and only for human support, we have minimal impact on local water resources. As such, there are minimal opportunities to reuse and recycle water, but this metric is tracked. We do however identify and implement opportunities to reduce and recycle the amount of water we consume. Detailed in the chart below is water use at Lenovo's manufacturing and R&D facilities, and some large office locations over the past seven years.

Lenovo does not engage in any intentional discharge of wastewater other than into municipal wastewater disposal systems. There were no significant accidental releases of wastewater, fuel, chemicals or other potentially harmful substances at Lenovo facilities during the fiscal year. The FY 2015/16 water data was third-party verified. <u>Click here</u> to see the FY 2015/16 Water Verification Statement, or visit: <u>www.lenovo.com/WaterandWaste</u> and follow the link from there.

#### **OTHER AIR EMISSIONS**

Lenovo prohibits the use of ozone-depleting substances in our products and manufacturing processes except in HVAC and fire-suppression equipment as permitted by law. Ozone-depleting substances used in HVAC and fire-suppression equipment are managed in accordance with local regulations, and intentional releases are prohibited. Lenovo requires the reporting of unintentional releases of chemical substances as an environmental incident. During FY 2015/16, there were no incidents of refrigerant release. We only added refrigerants to our equipment during maintenance services.

Lenovo does not have significant direct air emissions such as NOx and SOx. In addition, Lenovo has no wet chemical or industrial processes that use volatile organic compounds (VOC) and thus has no point sources of VOC. Household and cleaning products that contain small quantities of VOC are used at some of our facilities but associated fugitive emissions are minimal and are not quantified.



Figure 5.10 Water Use and Discharge

#### **BIODIVERSITY**

Lenovo is not aware of any significant impacts of its activities, products and services on biodiversity including impacts from water discharge and runoff from our operations. Lenovo requires an environmental site assessment for acquisition or divestiture of facilities or real estate. Our internal new project environmental assessment requires an evaluation relative to the potential for impacts on protected habitats or protected or endangered species.

# 5.5

Lenovo's commitment to protecting the environment dates back to our early days as a company. By the time the acquisition of the IBM PC division was completed in 2005, Lenovo had already developed technical specifications for PCs that included environmental attributes such as being energy efficient, while at the same time its commercial products were designed to meet China's rapidly evolving energy-saving targets.

With the globalization of Lenovo's reach in 2005, the company took environmental sustainability a step further by adopting a comprehensive Environmentally Conscious Products Program. Supported by Lenovo's Global Environmental Affairs team, this company-wide initiative was implemented by a network of Environmentally Conscious Product engineers and green product teams within each business unit.

In 2014, with the acquisitions of System x and Motorola Mobility, Lenovo's Environmentally Conscious Products Program expanded further to encompass these new business units. The integration of existing environmental design programs from these businesses into Lenovo's management system continued in FY 2015/16.

Volunteer Association. The Group furthers environmental education through hosting lectures and showing documentaries, and promotes green lifestyles through projects such as carpooling.

Protection Group of the Lenovo China

A meeting of the Environmental





# **PRODUCT MATERIALS**

#### USE OF RECYCLED PLASTICS

Starting in 2007, as new grades of recycled plastics with post-consumer content (PCC) became available, Lenovo's product development teams began to use these environmentally preferred materials to satisfy corporate environmental objectives and targets, meet new customer requirements, and achieve EPEAT<sup>™</sup> Gold registrations for our products.

Using these engineered plastics not only saves the natural resources and energy that would have gone into manufacturing new plastics, but also diverts both PCC and PIC from landfills. These environmental benefits are achieved while still creating a product that meets Lenovo's high performance standards.

Newly released products that meet EPEAT<sup>™</sup> PCC usage thresholds (10 percent or greater) include the ThinkPad L460, L560, E460 and E560; ThinkCentre M900z and M800z all-in-one desktops (greater than 30 percent); and the ThinkVision E2224 (49 percent). Additionally, PCC material use has been implemented or planned in a number of select ThinkPad notebooks, Lenovo notebooks, Lenovo desktop and all-in-one computers, and Think and Lenovo accessories at levels of one to eight percent where technically feasible.

Lenovo explores every possibility to use PCC as much as possible, especially in ThinkPad products. In October 2009, Lenovo introduced the ThinkPad SL410 and SL510 notebook models, both of which contain greater than 10 percent net PCC. Lenovo continues to expand its emphasis on green design with the ThinkPad L Series. The LCD cover, palm rests, and top and bottom cases of these notebooks use up to 30 percent PCC from sources such as used office water jugs and IT equipment. The L512 ThinkPad contains 18 percent net PCC. Each ThinkPad L Series notebook diverts the equivalent of 10 plastic water bottles from going to landfill. ThinkPad has also succeeded in using PCC in the very thin walls of battery packs. The ThinkPad Ultra Dock, ThinkPad Pro Dock, and ThinkPad Basic Dock are using PCC as well.



To overcome the continuing challenges of using recycled content in the design and manufacture of smart connected devices, especially notebooks, tablets and smartphones, Lenovo's team of engineers works closely with our PCC suppliers to develop and qualify new grades of plastic resins previously unavailable to the IT industry. Using PCC in IT products presents significant challenges due to the unique structural, performance and cosmetic requirements associated with these applications. Depending on the final application requirements, the plastic resins contain between 10 percent and 85 percent PCC. Some plastic resins also contain up to 20 percent PIC. All of these materials receive environmental and performance qualifications prior to their approval and use in Lenovo product applications.

#### **RECYCLED CONTENT USAGE TO DATE**

Since early 2005, Lenovo has used over 177 million pounds (gross) of plastic materials containing PCC and/or PIC in its products, with net PCC of over 80 million pounds and net PIC of more than 1.9 million pounds. In 2015, Lenovo used nearly 20.6 million pounds (gross) of recycled plastics with net PCC of over 11.6 million pounds. To continue this momentum, and encourage Lenovo's product groups to focus on increasing the use of these environmentally preferred materials and to reflect the maturation of this program, the following new targets were established for FY 2015/16:

- All product BUs shall use PCC in every product (when technical specifications and cost parity are met).
- Maintain or increase current percent PCC usage levels in the next generation of existing products.

In 2015, Lenovo used 20,600,000 pounds gross of recycled content plastics with 56 percent of that total being net post-consumer and postindustrial plastics.

The following graph shows Lenovo's annualized use of PCC and PIC plastics over the past five years:



Figure 5.12 Annualized Use of Plastics









#### **OTHER MATERIALS OF INTEREST**

Lenovo's corporate-wide environmental standards and specifications require the designers of all Lenovo IT products to consider certain environmentally conscious design practices to facilitate and encourage recycling and minimize resource consumption. Some examples include:

- All product lines adhere to the marking of plastic parts greater than 25 grams for identification of resins for recycling.
- Products are designed to minimize the types of plastics they contain, and avoid contamination of plastics by paints, glues or welded connections. Tools needed for disassembly to subsystem levels are also universally available.
- Product-specific upgradeability features are described in product literature and declarations for all Lenovo product lines.
- Recycled resins, ranging in recycled content from 10 percent to over 85 percent, are used in a number of Lenovo hardware applications and are specified as preferred materials where practical. Lenovo is working toward the goal of including some amount of recycled plastic in all new products.
- New products are evaluated for chemical emissions. To minimize potential volatile organic compound (VOC) emissions, nonsolvent based powder coatings are used for decorative painted parts wherever practical.

Lenovo supports a precautionary approach, ensuring that appropriate actions are taken even if cause-and-effect relationships are not fully established scientifically.

Lenovo's priority is to use environmentally preferable materials whenever applicable. In adhering to this precautionary approach, Lenovo supports restricting the intentional addition of materials that are potentially concerning when economically and technically viable alternatives exist. These restrictions may also include implementing concentration limits for incidental occurrences. For materials where economically and technically viable alternatives do not exist, Lenovo collects data on the usage of these materials above the defined concentration limit. This data can then be reported to customers or other stakeholders. Lenovo continues to actively search for environmentally preferable materials that can be used as substitutes. One example of this transition is in eliminating the use of mercury from backlighting in Lenovo displays. Lenovo completed the phase out of mercury in all our display parts and products in 2014.

We also expect our partners and suppliers to demonstrate the same commitment to environmentally sound practices. Our supplier specifications are available at: www.lenovo.com/global\_procurement/us/en/ Guidelines/Restrictions\_and\_Packaging.html.

Lenovo restricts the use of environmentally sensitive materials in our products. The specification encompasses both regulatory and Lenovo-imposed material bans and restrictions. This includes the prohibition of ozone-depleting substances in all applications, the restriction on the use of persistent organic pollutants (PoPs) under the Stockholm Convention, and the elimination of materials covered under European Union (EU) Restriction on Hazardous Substances (RoHS) and Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) even beyond those jurisdictions where regulatory requirements exist. Lenovo's implementation strategy and requirements are consistent with the requirements specified in the EU's RoHS Directive and REACH Regulation.

# Additional information about RoHS and REACH can be viewed at:

www.lenovo.com/social\_responsibility/us/en/ RoHS\_Communication.pdf www.lenovo.com/social\_responsibility/us/en/ Lenovo\_REACH\_SVHC\_Disclosure.pdf.

Lenovo supports the goal to phase out<sup>1</sup> brominated flame retardants (BFRs) and PVC, and is committed to driving its supply chain toward this goal. Lenovo has made significant progress toward the elimination of PVC and BFR from our systems. The focus continues to be on eliminating halogen from our top-selling products and across as many commodities as possible. Each product group completes a low halogen scorecard for each new product developed. The product groups have committed to improve the generation-to-generation low halogen score for at least one mainstream high volume product released during FY 2015/16.<sup>2</sup>

Highlights from 2015 include the following:

- Elimination of most PVC and BFR from ThinkPad notebooks. PVC is only used in power cords and cables. BFRs are used in power cords, cables, AC adapters, battery packs, planar ASMs, subcards, connectors and some modular parts. In addition, all ThinkPad notebooks have low halogen printed circuit boards.
- All Lenovo ThinkPads are low halogen with the exception of the power cord and adapter.
- Many Lenovo commercial monitors meet the iNEMI definition of low halogen with the exception of their PCBA and external cables.
- Lenovo ThinkCentre desktops have low halogen chassis and CPUs.
- <sup>1</sup> Lenovo supports the definition of <u>"BFR/PVC free" as</u> defined in the "iNEMI Position Statement on the 'Definition of Low-Halogen' Electronics (BFR/CFR/PVC-Free)."
- <sup>2</sup> To support this activity all BUs shall include a requirement for the evaluation of low halogen components (including raw card PCBs) in the development marketing requirements document and RFI/RFQs. Qualified low halogen parts available at cost parity shall be used.

Lenovo has completely phased out the use of PVC/BFR in all mechanical plastic parts (such as external covers, housings, etc.) across all Lenovo product lines. Lenovo currently prohibits the following from intentional addition to any Lenovo parts:

- Polybrominated Biphenyls (PBBs)
- Polybrominated Diphenyl Ethers (PBDEs)
- Deca-Brominated Diphenyl Ethers

Lenovo has also made significant progress in phasing out halogen in many commodities across several product lines. For example, all plastic enclosures; most components and connectors (with the exception of printed board laminates); all mechanical plastic parts such as product covers, housings, bezels, etc.; and many hard disk drives, optical disk drives, solid state drives, LCD screens, memory, CPUs, chipsets, communication cards and other commodities have offerings that meet the iNEMI definition of low halogen.

Lenovo plans to release additional BFR- and PVC-free models across the Think and Idea family of products as acceptable alternative materials become available, working toward the goal to phase out the use of these materials across all newly introduced products. We continue to work with our suppliers to pilot new BFR- and PVCfree applications. Lenovo recognizes that the phase-out of these materials is dependent upon the availability of suitable alternatives that meet Lenovo's technological, quality, environmental, health and safety requirements.

Lenovo has identified a list of materials and substances of environmental interest. These substances may be candidates for further restrictions in the future. Lenovo holds suppliers accountable for reporting the use of these materials through Supplier Material Declarations. An industry standard IPC 1752A XML Full Material Disclosure (FMD) form, submitted via the Green Data Exchange (GDX), is the preferred format for confirmation of compliance to the restrictions and for reporting when substances in question are above the specified concentration levels. We have made it a point to inform customers about the environmental attributes of our products and compliance with applicable laws and regulations through the presentation of a completed industry standard IT Eco Declaration (Annex B of ECMA-370 4th edition, June 2009). Declarations for newly released products are posted on Lenovo's environmental website at: www.lenovo.com/ecodeclaration.

Consistent with our precautionary approach, we continuously analyze the regulatory environment and consider input from our customers, nongovernmental organizations (NGOs) and other stakeholders in evaluating the potential health and environmental impacts of our products. We weigh these inputs to determine the restricted substances, as well as the substances of interest to be tracked for the purpose of reporting and for the consideration of future restrictions.

# PRODUCT ENERGY EFFICIENCY

Product energy efficiency remains a core focus for Lenovo. Through collaboration with other OEMs, as well as industry stakeholder work groups, existing and proposed global IT product energy efficiency policy, regulations and requirements are vetted against current and future technology. The results of this effort are leveraged to develop leading edge products with much improved overall and operating efficiencies. Ongoing activities include updates to the ENERGY STAR® program specifications, US DOE Appliance and Equipment standards, California Appliance Efficiency Program requirements, China CEC standards and a number of other emerging protocols and regulations.

To further improve product energy efficiency for desktops, workstations and servers, Lenovo certifies internal power supplies to Ecova Plug Load Solutions' 80 Plus program for power supply efficiency. 80 Plus certified power supplies are independently tested and verified to the programs rated efficiency criteria; i.e., Bronze, Silver, Gold and Platinum. Lenovo desktop, workstation and server products equipped with 80 Plus power supplies are significantly more energy efficient than systems equipped with typical power supplies.

The Lenovo ThinkPad product portfolio in FY 2015/16 included products ranging from ultra notebooks to workstations. Lenovo has achieved generation-to-generation improvement in energy efficiency and the resulting smaller carbon footprint of ThinkPad products. The average energy consumption per ThinkPad product decreased from 24 to 22 KWh per year. With 10 million ThinkPad products manufactured in FY 2015/16, that translates to an improvement in overall average energy consumption from 243 million kWh in FY 2014/15 to 227 million kWh, and an overall emissions reduction of approximately 6.6 percent (122 million MT to 114 million MT of CO<sub>2</sub>e). Lenovo ThinkPad products thus helped avoid eight million MT of  $CO_2e$  in FY 2015/16.



<sup>3</sup> This data was generated based on the entire ThinkPad notebook product portfolio, ranging from ultra notebooks to workstations. Averages were obtained using typical energy consumption (TEC) values from ENERGY STAR\* test reports conducted by independent third parties. TEC values for seven representative models of product series in the portfolio were averaged using equal weighting. This result was then applied across total sales of all ThinkPad products for FY 2015/16.

The energy consumption and performance of Lenovo products meets the efficiency requirements of China, Japan, the United States, Europe and other jurisdictions. Many Lenovo notebook, desktop, server and monitor products satisfy and even exceed the current ENERGY STAR® requirements. The ENERGY STAR® qualified models are listed at www.energystar.gov. For more information about Lenovo's energy-efficient products, go to: www.lenovo.com/energy.

# ENVIRONMENTALLY RESPONSIBLE PRODUCTS

Product environmental leadership is a fundamental component of Lenovo's environmental policy. This policy requires each of our product groups to develop, manufacture and market products that are energy efficient and that minimize their impact on the environment. Lenovo is an industry leader with respect to energy-efficient products, the use of environmentally preferred materials and green product packaging.

Lenovo designs its products to maximize their product lifecycle and offers three-year standard warranties and five years of replacement parts availability on many of our top selling commercial products to support this extended lifecycle. Three-year warranties are offered as the base warranty on many top selling Think-branded products, including all commercial monitors, notebooks, desktops and many others. In addition, customers can purchase warranty upgrades to extend the base warranty by one or two years for many products. Base warranties for Lenovo consumer (Idea) products vary by product type and geography, but typically start at one to two years for the base warranty with the option for many products to purchase an extended warranty. For more details on Lenovo's warranties, please click here www.lenovo.com/ services warranty/us/en/.

Lenovo also designs innovative features into our products to help extend the products' useful life, including Lenovo Longevity Battery Technology which extends notebook battery cycle life through key technologies including:

- Increased use of lithium polymer cells: Used in notebooks and tablets with embedded batteries, these cells typically provide longer life cycles than lithium ion cylindrical cells.
- Longer lifespan batteries: Many Lenovo embedded batteries are designed to last two to three times longer than standard batteries. Lenovo Services offers three-year warranty upgrades on many embedded batteries. The longer lifespan is made possible due to carefully selected cells and charge algorithms.
- Dual mode charging algorithms: These technologies are used on most notebook batteries and adjust charge voltage and current over time to prolong the battery's lifespan. The feature is implemented in the hardware and as part of the battery firmware so it is not operating system or application dependent and works with any software load.
- Field updateable battery firmware: Customers can download a firmware update utility which allows them to apply firmware fixes to batteries in service, eliminating the need to replace batteries due to firmware problems. This program allows customers to apply fixes quickly and at no cost, even on batteries outside of warranty.

Lenovo offers end-of-life recycling and management programs for both business and consumer customers. As a global company, Lenovo offers programs in many countries around the world. Specific offerings are tailored to specific geographic location and business need. Free product recycling is offered to consumers in some locations. Please visit the Lenovo recycling program page for additional recycling information.

# PRODUCT PACKAGING

Lenovo is committed to offering environmentally preferable packaging for its products. Over the past several years, Lenovo has had a strong focus on increasing the use of recycled and recyclable materials in packaging, reducing the size of packaging, and expanding the use of bulk and reusable packaging solutions.

Beginning in 2008 with the ThinkCentre M58/58p ECO USFF desktop PC, Lenovo has implemented the use of 100 percent recycled and recyclable packaging material on many products. The new packaging material, made from 100 percent recycled thermoformed cushions, enables PCs to be stacked together and requires less packaging material. This new material also helps minimize shipping costs. In FY 2015/16, Lenovo began using 100 percent PCC foam packaging for its IdeaPad YOGA and Y Series notebooks. In addition, on many Lenovo notebook product lines, Lenovo has implemented the use of 100 percent post-consumer molded fiber (paper pulp) packaging, which can typically be readily recycled in municipal waste streams. Lenovo discourages the use of polystyrene packaging wherever possible, and encourages the use of molded pulp, fiber and LDPE. For more information about the process for making and recycling LDPE thermoformed cushions, click here or go to www.lenovo.com/packaging and follow the link from there.

#### The Pioneering Achievement in Lenovo:

Lower environmental impacts through smarter packaging

## The Team Behind It: The Packaging Team

#### The Story:

Lenovo recognizes the environmental costs of packaging and has been implementing a multipronged effort to reduce this impact. The primary strategy has been to minimize the consumption of packaging material while driving the use of environmentally sustainable materials.

Design optimization and refinement across all Lenovo product shipments, coordinated by the Packaging Team, has yielded significant packaging savings – since 2008, Lenovo has been able to eliminate 2,000 tons of packaging consumption by weight. In FY 2015/16 alone the Team reduced packaging consumption by 800 tons.

Refining the packaging design and reducing the packaging size also can lead to increased shipping efficiency. In FY 2015/16, improvements in design and packaging of the IdeaPad G series, the ThinkPad E460, L460 and X250, the M600, M700, M900, and C20-00 desktops, and 10 server models led to the result of being able to stack more units per pallet for shipping.

Every year the Packaging Team works with each business unit to target at least one product to make a five percent reduction in packaging volume or weight. These reductions often lead to savings in packaging and shipping costs as the packaging is smaller or lighter.

In addition to reducing the consumption of packaging material, the Packaging Team has been continually looking to ramp up the use of more environmentally friendly materials. Similar to the previous fiscal year, the Team achieved its target in FY 2015/16 of increasing by 10 percent the amount of 100 percent post-consumer recycled content (PCC) packaging material used to package Lenovo products. The Team will look to increase PCC usage in packaging by another 10 percent in FY 2016/17.

The Team's vision for reducing the weight of shipping pallets was realized in FY 2015/16, when the use of a

lighter weight pallet was launched in Lenovo. The new pallet will not only realize end-to-end cost savings, but will also lower carbon emissions associated with transportation and save an estimated 2,400 trees per year by reducing the amount of wood used per pallet.



Old and new packaging comparison



Newly designed pallet

Lenovo continues to drive increases in the use of recycled content materials in product packaging. For example, all Think product primary carton boxes are certified to contain a minimum of 50 percent post-consumer fiber content and are required to use the maximum available postconsumer material where adequate supplies exist without compromising required packaging performance characteristics. The use of recycled content in Lenovo corrugated box packaging averages more than 70 percent. Lenovo has also transitioned 95 percent of ThinkPad products to recycled cushioning materials with the ThinkPad Edge using 100 percent recycled cushioning materials. Printing on boxes is done via flexography with water-based, non-toxic, RoHScompliant inks.

Lenovo has a strong focus on reducing the size of our packaging to minimize the amount of materials used while maintaining adequate protection for our products. Smaller packages also contribute to increased pallet density, enabling Lenovo to increase pallet density by over 33 percent in many cases. Lenovo uses reusable bulk packaging in our own internal operations for the transportation of chassis to manufacturing locations. In addition, bulk packaging and reusable bulk packaging may be available for many of Lenovo's products for customers in many regions.

#### Reuse

Lenovo provides the end customer an optional returnable packaging service, where the packaging materials can be sent back to Lenovo after receiving the products and reused for new shipments by Lenovo. Lenovo is also devoted to the reuse of incoming component packaging, especially in the return of chassis packaging.

#### **Reducing Paper**

Lenovo has also eliminated the use of multipage user manuals shipped with many of our products. For example, with our line of PC options and accessories, Lenovo was able to condense 50-page user manuals into one-page posters. This single action allowed Lenovo to save approximately 350 million printed pages per year.

#### **Packaging Objectives and Targets**

Packaging has been identified as a significant environmental aspect of Lenovo's operations, and as a result, it remains a focus item under Lenovo's environmental management system (EMS). Lenovo's primary EMS packaging objective is to "minimize the consumption of packaging material while driving the use of environmentally sustainable materials." Targets in support of this objective were achieved during 2015/16 as follows:

#### Fully Met:

- Maintain 100 percent Forest Stewardship Council (FSC) certification for all virgin fiber used for packaging of Think-branded products.
- All BUs to target at least one product to make at least a five percent reduction in volume or weight.
- All BUs to ramp up the implementation ratio of 100 percent PCC (10 percent increase by shipping volume).

#### Partially Met:

- Enhance packaging recyclability and encourage the more easily recyclable materials, especially those that can be recycled in municipal waste streams.<sup>1</sup>
- Identify one new product to implement use of 100 percent biodegradable packaging.<sup>2</sup>

For FY 2016/17, Lenovo has announced the following targets related to packaging and paper:

- Maintain 100 percent FSC or equivalent certification for all virgin fiber used for packaging for all product brands.
- All BUs to ramp up the implementation ratio of 100 percent PCC (10 percent increase by shipping volume).
- Enhance packaging recyclability and encourage the more easily recyclable materials, especially those that can be recycled in municipal waste streams.<sup>1</sup>
- All BUs to target at least one new product (mainstream) to make at least a five percent reduction in volume or weight.
- Establish a process and procedure to qualify/ certify PCC and bio-base packaging materials
- <sup>1</sup> Across all brands, we use EPS only in monitor packaging, and we are continuing efforts to reduce the use of EPS.
- <sup>2</sup> Does not apply to Mobile Business Group.

#### Packaging Specifications

Lenovo communicates packaging environmental requirements to suppliers via a series of packaging specifications. These specifications include requirements for minimum amounts of recycled content, marking for proper recycling, banned materials and other elements. All corrugated container (box) packaging should use a minimum of 50 percent post-consumer recycled fiber, and all paperboard packaging should contain a minimum of 45 percent post-consumer recycled fiber and 100 percent recovered fiber. In addition to meeting these specifications, many Lenovo packaging suppliers provide FSCcertified products for Lenovo packaging. Lenovo is currently in the process of assessing the global availability of FSC-certified packaging to support manufacturing facilities in all geographies.

## The Pioneering Lenovo Product: ThinkCentre M900 Tiny

#### The Story:

The popular ThinkCentre M Series Tiny desktops are compact yet versatile. Used as a stand-alone or mounted on the back of a monitor, they offer powerful processing capability to handle complex business tasks and can withstand punishing treatment – humid environments, extreme temperatures, sustained vibration, dust, solar radiation and other adversities.

While all M Series Tiny models offer outstanding features and performance in terms of sustainability, the ThinkCentre M900 Tiny is worthy of particular mention. It contains 22 percent post-consumer content recycled plastic, and boasts a number of third-party eco-labels representing verified performance (see pages 82-83 for more information about eco-labels):

- <u>ENERGY STAR®</u> energy consumption
- <u>EPEAT Gold</u> (US) overall sustainability (all EPEAT-registered products must meet 23 mandatory environmental performance criteria. An additional 28 optional criteria are used to determine whether products earn EPEAT Bronze, Silver or Gold recognition)
- <u>GREENGUARD</u> low chemical emissions for a safe indoor environment
- <u>ULE Gold</u> overall environmental performance based on an Institute of Electrical and Electronic Engineer (IEEE) standard
- <u>TÜV Rheinland Green Product Mark</u> overall sustainability

Lenovo publishes product sustainability performance in its ECO Declarations and product carbon footprints in separate PCF documents – <u>click here</u> to view the ECO Declaration and <u>here</u> to view the PCF for the ThinkCentre M900 Tiny.



# 5.4 PRODUCT END-OF-LIFE MANAGEMENT (PELM)

At Lenovo, PELM includes the reuse, refurbishing, de-manufacturing, dismantling, reclamation, shredding, recycling, treatment and disposal of products, parts and peripherals when they are taken out of service, reach end-of-life and/or are scrapped. This includes the recovery and reuse of products, parts subassemblies and components, including scrap electronic and electrical components such as disk drives, printed wiring boards, power supplies, and cables and cords. Lenovo-branded and non-branded products owned or accepted by Lenovo (including customer returns or take back) are included in this definition.

# KEY ELEMENTS OF PELM

Lenovo supports efforts to reduce the volume of end-of-life electronic products being disposed of in landfills, as well as efforts to reduce the need for new raw materials by increasing the beneficial reuse of products and parts or recycling of materials.

• We support legislation assigning financial responsibility for end-of-life management to the individual producers.

- We advocate legislative initiatives that allow at least the option for manufacturers to recover their own brand products, using the information gained from recycling their own brands to be fed back into the product design process. This practice optimizes the cost not only for the manufacturer, but the consumer as well.
- We encourage our customers to reuse or recycle products at the end of their life cycle by offering consumers and/or commercial clients a range of recycling options for disposing of products, batteries and product packaging worldwide through voluntary programs and/or country, province or state mandated programs.

If you are interested in learning more about these programs, please visit: www.lenovo.com/recycling.

# ACHIEVEMENTS

Significant achievements in Lenovo's product end-of-life management include the following:

- 2005 Lenovo implemented legally required product take-back and recycling solutions in all regions where Lenovo directly sells products.
- 2005 Lenovo established a product takeback and recycling program in the United States, providing free collection and recycling to consumers for Lenovo and select IBM PCs.
- 2006 Lenovo introduced a free product take-back and recycling program in China for Legend- and Lenovo-branded PCs, notebooks, monitors and servers, ThinkPad notebooks, ThinkCentre PCs and ThinkVision Monitors.
- **2007** Lenovo launched a free take-back and recycling program in India for the same products mentioned above.

- 2009 Lenovo launched Asset
   Recovery Services to provide secure and
   environmentally sound return and processing
   of products replaced by Lenovo business
   customers, with coverage in over 40 countries.
   This offering is maturing with increased annual
   customer returns with over 80 percent of
   returns being processed for reuse rather than
   disposal.
- 2011 The free product take-back and recycling program in the United States was enhanced to provide increased collection opportunities.
- 2011 Lenovo expanded consumer access to recycling in Latin America by launching enhanced collection and recycling programs in Colombia as part of collective industry plans to comply with recently enacted regulations through an industry group named ECOCOMPUTO.
- 2013 All Lenovo U.S. Asset Recovery Suppliers are R2 certified.
- 2014 Lenovo India joined a new initiative, in association with MAIT, called "I am Green." "I am Green" is a program focused on increasing awareness with consumers about the importance of safe disposal of e-waste. As part of this program, several road shows were conducted in Bangalore and Delhi and a pavilion was hosted at a November 2014 consumer electronics event in Bangalore.
- 2014 Lenovo expanded consumer access to recycling in Latin America by launching enhanced collection and recycling programs in Peru and Mexico as part of collective industry plans to comply with recently enacted regulations in these two countries.

- 2014 Lenovo became a R2 Leader. R2 Leaders work with Sustainable Electronics Recycling International (SERI) to demonstrate leadership in electronics recycling issues, support responsible recycling practices, and actively participate in projects to advance the safe and sustainable management of used electronics. Lenovo has donated funds to help translate the R2:2013 Standard, R2 Guidance Document, and R2 Code of Practices into both Spanish and Portuguese, which will help in a broader effort to expand R2 certification in Central and South America.
- 2015 Lenovo continued its partnership with RLGA in Latin America to ensure compliance with recycling legislation in Colombia, Mexico and Peru.
- 2015 Lenovo avoided more than 50,000 MT of CO<sub>2</sub>e emissions due to using PCC and PIC plastics in Lenovo systems during CY 2005-2015.
- **2015** Lenovo expanded its Asset Recovery Program in Southeast Asia, adding nine new country locations to the program.

# PRODUCT TAKE-BACK PROGRAMS

As a global company, Lenovo offers end-of-life recycling and management programs for both consumer and business customers in many countries around the world. Offerings are tailored to the specific location and business need and include programs for recycling products as well as packaging and batteries in many geographies. In many European countries Lenovo offers for our customers free-of-charge WEEE (waste electrical and electronic equipment), packaging and battery recycling options through local recycling systems. With support of our EMEA compliance partner 1cc, Lenovo managed over 50 direct takeback systems for WEEE, batteries and packaging in more than 20 countries. In FY 2015/16 we managed over 32,000 tons of equipment. Additionally, Lenovo's newly acquired System x and Motorola Mobility businesses were successfully integrated into the Lenovo EMEA recycling procedures without any major breaches in compliance during transition.

With this engagement, Lenovo financed takeback activities in Europe totaling over 5 million Euros in FY 2015/2016. Lenovo will continue to play an active role in the EMEA recycling landscape and plans to extend coverage of Lenovo take-back systems to regions in Eastern Europe and Russia.

Customers can obtain information about Lenovo's recycling programs and details on offerings by country at <u>www.lenovo.com/recycling</u>.

For our business customers, Lenovo offers Asset Recovery Services (ARS) in more than 40 countries. Customer-access information for these programs in the Americas, Asia Pacific and Europe/Middle East/Africa can also be obtained at www.lenovo.com/recycling.

# MANAGEMENT OF LENOVO'S PELM SUPPLIERS

Lenovo maintains an extensive program for ensuring that remarketed products and parts and the refurbishing, remanufacturing, recycling and disposal of end-of-life products owned by Lenovo or returned by customers are accomplished in an environmentally conscious and legally compliant manner. This program includes Lenovo on-site environmental evaluations and approvals in accordance with Lenovo's stringent auditing protocol.

Some of the critical evaluation requirements include:

- Supplier completion of Lenovo's initial supplier evaluation form declaring their processing capabilities and controls, environmental, health, and safety management systems, and legal compliance.
- Supplier full downstream disclosure of facilities involved with receiving equipment or waste, reusing equipment as a product, part or material, and disposing of waste, and ensuring all of these facilities maintain compliance.
- Successful Lenovo on-site environmental and services audit of all facilities and processes prior to their use, and documentation of audit findings and recommendations in a final report.
- Review of all audit documentation and recommendations by Lenovo's Product End-of-Life Management Program Manager, and final approval by Lenovo's Director of Global Environmental Affairs.

- Maintain Lenovo Corporate Approved Supplier Facility listing by geography and approved services for use by all Lenovo organizations, sites and programs worldwide in Lenovo's internal database.
- Establishment of a Lenovo contract with each approved supplier with specific environmental terms and conditions related to expected environmental performance and reporting.

Suppliers include surplus buyers, end-of-lease, asset recovery services, legal and voluntary product take-back providers, field services, dismantlers, recyclers and disposal vendors. All recovered products and parts are required to be data wiped, refurbished, tested for function, labeled as refurbished and resold where they will be used as originally intended without further refurbishing before use. Suppliers are required to use Lenovo-approved recyclers for the disposition of non-working products and parts and waste generated from their refurbishing processes. Lenovo prohibits the shipment of hazardous waste to non-OECD countries.

Additionally, Lenovo incorporates specific environmental terms and conditions into contracts and agreements with all of these suppliers. Approved and contracted facilities are required to submit regular environmental reports documenting the total quantities of equipment and e-waste collected and processed on behalf of Lenovo and Lenovo customers, including the identification of methods of disposition and their percentages. Periodic follow-up audits are also completed to ensure continued compliance to legal and Lenovo environmental requirements.

# RECOVERY AND RECYCLING TRENDS

During the 2015 calendar year, Lenovo financed or managed the processing of 18,600 metric tons, equivalent to more than 4.1 million pounds, of Lenovo-owned and customer-returned computer equipment. Of this total, 4.2 percent was reused as products or parts, 78.6 percent was recycled as materials, 2.7 percent was incinerated with waste-to-energy recovery, 4.3 percent was incinerated as disposal treatment and 10.2 percent was disposed of by landfill. As part of Lenovo's continual improvement activities, we look for opportunities to reduce the use of incineration and landfills, and maximize reuse and recycling.

Since Lenovo's establishment as a global company in May 2005, we have processed more than 153,883 metric tons, or 339 million pounds, of computer equipment through our contracted service providers. Trends for the most recent five calendar years are illustrated below:



# Figure 5.14 Recovery and Recycling Trends (PELM)



# Figure 5.16 Product Take-Back (PTB) Disposition



Our customers have shown considerable interest in our recycling programs. In 2015, customer returns constituted more than 15,400 metric tons, or more than 34.1 million pounds. Our 2015 performance includes data from Lenovo's Asset Recovery Services offered to large enterprises, along with data from Lenovo's other voluntary and legally required product take-back programs for consumers and businesses. The recycled customer returns in 2015 represent 5.5 percent of the total weight of new products put on the market in 2011. Figure 5.17 illustrates customer returns by geography.



Figure 5.17 Product Take Back (PTB) by Geography



# APPENDIX

6.0	APPENDIX
6.1	Lenovo Reference Documentation
6.2	The Global Reporting Initiative131
6.3	The UN Global Compact131
6.4	Hong Kong Stock Exchange Environmental, Social and132 Governance (ESG) Reporting Guide

# 6.1 LENOVO REFERENCE DOCUMENTATION

Lenovo has posted extensive sustainability information on our public website. Below are hyperlinks to some of those pages. If you are reading this as a printed document, you may get to these links by opening this Sustainability Report on Lenovo's website at www.lenovo.com/sustainability. Lenovo maintains current copies of many of the policies, certifications, verification statements and other documents mentioned in this report online. Please visit www.lenovo.com/social\_ responsibility/us/en/social\_responsibility\_ resources/ to access these resources.

#### Lenovo Sustainability Web Pages

- Product: www.lenovo.com/social\_responsibility/ us/en/product/
- » Think Green Products Energy: www.lenovo.com/energy
- » Think Green Products Materials: www.lenovo.com/materials
- » Think Green Products Packaging: www.lenovo.com/packaging
- » Think Green Products Recycling: www.lenovo.com/recycling
- » Compliance Information: www.lenovo.com/compliance
- » Accessibility Information: www.lenovo.com/accessibility
- Environment: <u>www.lenovo.com/environment</u>
  - » Think Green Climate: www.lenovo.com/climate
  - » Think Green Waste and Water: www.lenovo.com/waterandwaste
- Social: <u>www.lenovo.com/csr</u>
  - » Social Investments: www.lenovo.com/social\_investments
- Global Supply Chain: www.lenovo.com/supply\_chain
- Sustainability Reports:
   <u>www.lenovo.com/sustainability</u>

6.3 THE UN

MPA(

6.2 THE GLOBAL REPORTING INITIATIVE

The Global Reporting Initiative (GRI) is an international not-for-profit organization that sets out principles and indicators for measuring and reporting an organization's economic, environmental, and social performance and impacts, as well as communicating its approach to governance.

GRI's reporting framework has informed Lenovo's reporting for many years. <u>Click here</u> to see the GRI index for this report. This index is provided to assist readers in understanding how our report aligns with the GRI Guidelines for Sustainability Reporting, version G4. Lenovo's FY 2015/16 Sustainability Report and the GRI Index taken together are in accordance with GRI G4 Core.

For more information about the GRI Guidelines, visit the GRI website at <u>www.globalreporting.org</u>.

#### The UN Global Compact is a public-private strategic policy initiative for businesses committed to aligning operations and strategies with 10 universally accepted principles in the areas of human rights, labor, environment and anti-corruption. Lenovo became a signatory to the UN Global Compact in 2009 and fully

#### **Human Rights**

• **Principle 1**: Businesses should support and respect the protection of internationally proclaimed human rights; and

embraces its policies and principles:

• **Principle 2**: make sure that they are not complicit in human rights abuses.

#### Labor

- **Principle 3**: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
- **Principle 4**: the elimination of all forms of forced and compulsory labor;
- **Principle 5**: the effective abolition of child labor; and
- **Principle 6**: the elimination of discrimination in respect of employment and occupation.

#### Environment

- Principle 7: Businesses should support a precautionary approach to environmental challenges;
- **Principle 8**: undertake initiatives to promote greater environmental responsibility; and
- Principle 9: encourage the development and diffusion of environmentally friendly technologies.

APPENDIX

#### **Anti-Corruption**

• **Principle 10**: Businesses should work against corruption in all its forms, including extortion and bribery.

To see Lenovo's UN Global Compact Participant information, visit <u>www.unglobalcompact.org/</u> <u>what-is-gc/participants/6103-Lenovo</u>. 6.4 HONG KONG STOCK EXCHANGE ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) REPORTING GUIDE

Lenovo is listed on the Hong Kong Stock Exchange and prepared this report in accordance with Hong Kong Stock Exchange ESG Reporting Guide requirements. The following index provides a cross-reference of the "Comply or Explain Provisions and Recommended Disclosures" of the Guide, and where the corresponding information can be found in this report and our GRI Content Index.

# HONG KONG STOCK EXCHANGE ESG REPORTING GUIDE CONTENT INDEX

"Comply or explain" Provisions	Recommended Disclosures	Page Numbers	Lenovo's GRI Index	Comments/ Explanation If Not Reported
A. Environmental				
Aspect A1: Emissions				
General Disclosure		76-77, 82-110	G4-DMA Aspect: Emissions	
<ul> <li>(a) the policies; and</li> <li>(b) compliance with relevant laws and regulations that have a significant impact on the issuer</li> </ul>			G4-DMA Aspect: Effluents and Waste G4-DMA	
relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and nonhazardous waste.			Aspect: Compliance G4-EN29	
Note: Air emissions include NOx, SOx, and other pollutants regulated under national laws and regulations.				
Greenhouse gases include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride.				
Hazardous wastes are those defined by national regulations.				
KPI A1.1 The types of emissions and respective emission data.		19-20, 102-110	G4-EN15, G4-EN16, G4-EN17, G4-EN18, G4-EN21	

	ply or explain" Provisions	Recommended Disclosures	Page Numbers	Lenovo's GRI Index	Comments/ Explanation If Not Reported
KPI A1.2	Greenhouse gas emissions in total and, where appropriate, intensity (e.g. per unit of production volume, per facility).		19, 102-106	G4-EN15, G4-EN16, G4-EN17, G4-EN18	
	- Scope 1 emissions		19	G4-EN15	
	- Scope 2 emissions		19	G4-EN16	
	- Scope 3 emissions		19	G4-EN17	
KPI A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).		20, 109	G4-EN23, G4-EN25	
KPI A1.4	Total nonhazardous waste produced (in tonnes) and, where appropriate, intensity (e.g., per unit of production volume, per facility).		20, 109	G4-EN23	
KPI A1.5	Description of measures to mitigate emissions and results achieved.		22-29, 86-102, 108, 116-119	G4-EN25	
KPI A1.6	Description of how hazardous and nonhazardous wastes are handled, reduction initiatives and results achieved.		23, 28, 109	G4-EN23, G4-EN25	

	ply or explain" Provisions	Recommended Disclosures	Page Numbers	Lenovo's GRI Index	Comments/ Explanation If Not Reported
Aspect A2	2: Use of Resources				
resources, water and Note: Reso in product transporta	isclosure In the efficient use of including energy, other raw materials. Dources may be used tion, in storage, ation, in buildings, equipment, etc.		76-77, 87-127	G4-DMA Aspect: Materials G4-DMA Aspect: Energy G4-DMA Aspect: Water	
KPI A2.1	Direct and/or indirect energy consumption by type (e.g., electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility).		19, 102	G4-EN3, G4-EN4, G4-EN5	
KPI A2.2	Water consumption in total and intensity (e.g., per unit of production volume, per facility).		19, 110	G4-EN8	
KPI A2.3	Description of energy use efficiency initiatives and results achieved.		24, 28, 91-101	G4-EN6	
KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved.		110	G4-EN9	

	ply or explain" Provisions	Recommended Disclosures	Page Numbers	Lenovo's GRI Index	Comments/ Explanation If Not Reported
KPI A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.		118-119		Lenovo does not report total packaging materials used for finished products; rather, Lenovo tracks packaging on a per product basis and reports examples of accomplishments. Tracking on a per product basis allows Lenovo to drive improvements in generation-to- generation product packaging designs resulting in quantifiable environmental benefits. The amount of total packaging used would be mainly dependent on sales volumes, so it is not the most appropriate metric for Lenovo to use to drive real improvements in packaging design. By setting our packaging improvement goals at the product level, we are able to drive and measure improvements in design that are not dependent on overall product sales volumes.

"Comply or explain" Provisions	Recommended Disclosures	Page Numbers	Lenovo's GRI Index	Comments/ Explanation If Not Reported					
Aspect A3: The Environment and Natural Resources									
General Disclosure Policies on minimizing the issuer's significant impact on the environment and natural resources.		76-77	G4-DMA Aspect: Overall						
KPI A3.1 Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.		90-127	G4-EN27, G4-EN30						
B. Social		'							
Employment and Labour Praction	ces								
Aspect B1: Employment									
General Disclosure		48-57	G4-DMA						
Information on:			Aspect: Employment, G4-LA2						
<ul> <li>(a) the policies; and</li> <li>(b) compliance with relevant laws and regulations that have a significant impact on the issuer</li> </ul>									
relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination and other benefits and welfare.									

"Comply or explain" Provisions	Recommended Disclosures		Page Numbers	Lenovo's GRI Index	Comments/ Explanation If Not Reported
	KPI B1.1	Total workforce by gender, employment type, age group and geographical region.	17	G4-10	
	KPI B1.2	Employee turnover rate by gender, age group and geographical region.			Lenovo does not report this information.
Aspect B2: Health and Safety			1		
General Disclosure Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.			58-59	G4-DMA Aspect: Occupational Health and Safety	
	KPI B2.1	Number and rate of work-related fatalities.	17	G4-LA6	
	KPI B2.2	Lost days due to work injury.	17	G4-LA6	
	KPI B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored.	58-59	G4-LA5	

"Comply or explain" Provisions		ommended sclosures	Page Numbers	Lenovo's GRI Index	Comments/ Explanation If Not Reported				
Aspect B3: Development and Training									
General Disclosure Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities. Note: Training refers to vocational training. It may include internal and external courses paid by the employer.			51-53	G4-DMA Aspect: Training and Education, G4-LA10					
	KPI B3.1	The percentage of employees trained by gender and employee category (e.g., senior management, middle management).			Lenovo has implemented a new employee learning system and will be reporting this information next fiscal year.				
	KPI B3.2	The average training hours completed per employee by gender and employee category.			Lenovo has implemented a new employee learning system and will be reporting this information next fiscal year.				
Aspect B4: Labor Standards									
General Disclosure			48-49, 60-61	G4-DMA					
Information on:			00-01	Aspect: Forced or Compulsory					
<ul> <li>(a) the policies; and</li> <li>(b) compliance with relevant laws and regulations that have a significant impact on the issuer</li> </ul>				Labor G4-DMA Aspect: Child Labor Risk					
relating to preventing child and forced labor.									

"Comply or explain" Provisions	Recommended Disclosures		Page Numbers	Lenovo's GRI Index	Comments/ Explanation If Not Reported
	KPI B4.1	Description of measures to review employment practices to avoid child and forced labor.	48-49, 56-57, 60-61	G4-HR5, G4-HR6	
	KPI B4.2	Description of steps taken to eliminate such practices when discovered.	48-49, 56-57, 60-61	G4-HR5, G4-HR6	
Operating Practices					
Aspect B5: Supply Chain Manag	gement				
General Disclosure Policies on managing environmental and social risks of the supply chain.			37-42, 60-61, 94	G4-DMA Aspect: Supplier Environmental Assessment G4-DMA Aspect:	
				Supplier Human Rights Assessment	
	KPI B5.1	Number of suppliers by geographical region.			Of the 79 suppliers that represent 95 percent of Lenovo's spend, 27 are located in China and 52 are outside of China.
	KPI B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored.	37-42, 60-61	G4-HR10, G4-HR11, G4-EN32, G4-EN33, G4-LA14, G4-LA15, G4-SO9, G4-SO10	

"Comply or explain" Provisions	Recommended Disclosures		Page Numbers	Lenovo's GRI Index	Comments/ Explanation If Not Reported
Aspect B6: Product Responsib	ility				
General Disclosure			43-45		
Information on:					
<ul> <li>(a) the policies; and</li> <li>(b) compliance with relevant laws and regulations that have a significant impact on the issuer</li> </ul>					
relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.					
	KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	45		For products sold in FY 2015/16, Lenovo had no recalls for safety and health reasons.
	KPI B6.2	Number of products and service related complaints received and how they are dealt with.		G4-PR6, G4-PR8	
	KPI B6.3	Description of practices relating to observing and protecting intellectual property rights.	36		
	KPI B6.4	Description of quality assurance process and recall procedures.	43-44		

"Comply or explain" Provisions			Page Numbers	Lenovo's GRI Index	Comments/ Explanation If Not Reported
	KPI B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored.	56	G4-PR8	
Aspect B7: Anti-corruption					
<ul> <li>General Disclosure</li> <li>Information on:</li> <li>(a) the policies; and</li> <li>(b) compliance with relevant laws and regulations that have a significant impact on the issuer</li> <li>relating to bribery, extortion, fraud and money laundering.</li> </ul>			36, 56-57	G4-DMA Aspect: Anti- corruption G4-DMA Aspect: Public Policy G4-DMA Aspect: Anti- competitive Behavior G4-DMA Aspect: Compliance	
	KPI B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.		G4-SO5	
	KPI B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.	57		

"Comply or explain" Provisions	Recommended Disclosures		Page Numbers	Lenovo's GRI Index	Comments/ Explanation If Not Reported
Community					
Aspect B8: Community Investr	nent				
General Disclosure Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.			63	G4-DMA Aspect: Local Communities	
	KPI B8.1	Focus areas of contribution (e.g., education, environmental concerns, labour needs, health, culture, sport).	64-73		
	KPI B8.2	Resources contributed (e.g., money or time) to the focus area.	18		

