Life Cycle Assessment for Galaxy Book5 Pro 16(KR)

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; pre-manufacturing; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040/44 series. Samsung has used SDP(Sustainability Data Platform) to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 11 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.10
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML v4.8 (Climate Change:IPCC)
LCA software	SDP(Sustainability Data Platform)

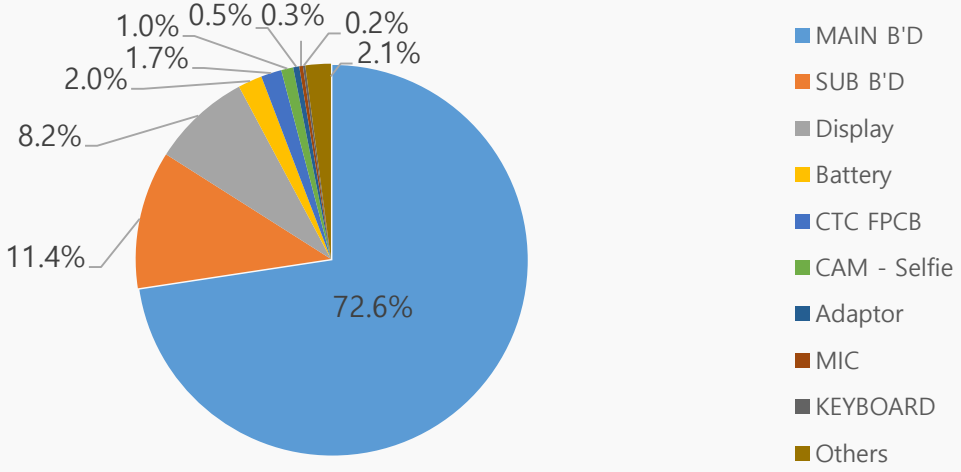
System boundary of LCA

Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics
Distribution	From Vietnam to KR
Use	4 years use
Disposal	Waste treatment of parts and material

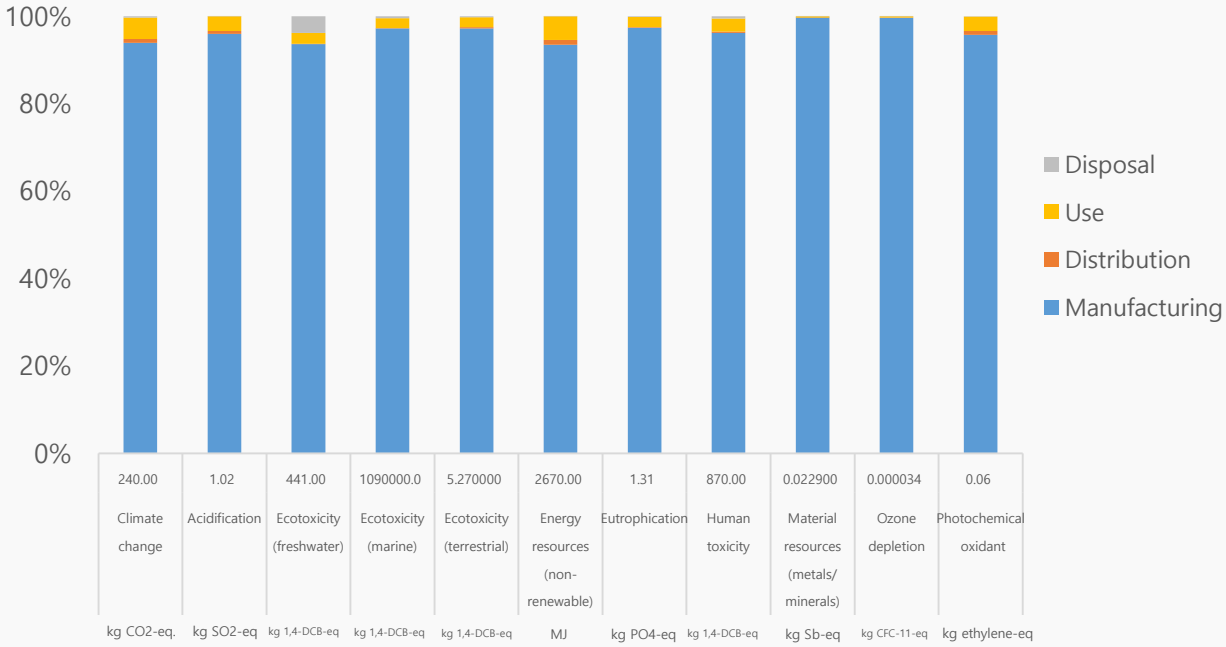
Product Features

Model name	NT965XHD (Galaxy Book5 Pro16)	
Dimension (mm)	355.4 x 250.4 x 12.5	
Display (mm)	406.4	
Weight (g)	Product & Acc.	1758.52
	Packages	1027.16

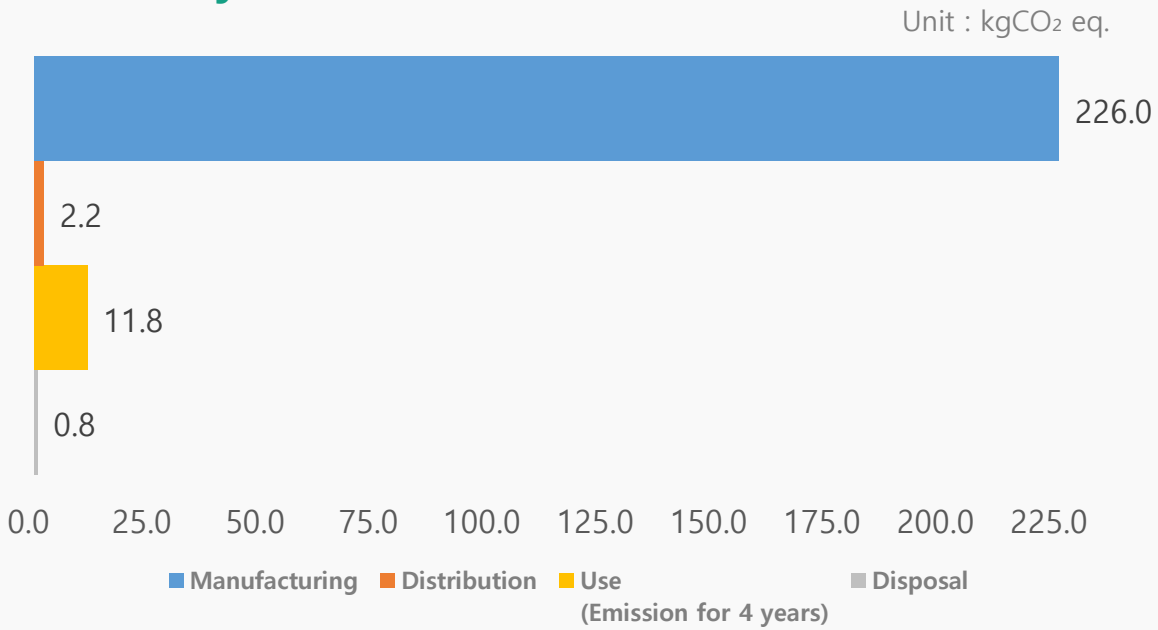
Global Warming Impact Profile



Characterized Environment Impact



Life Cycle Carbon Emissions



* The results differ from to region, But not by much.

Life Cycle Assessment for Galaxy Book5 360 15(US)

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; pre-manufacturing; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040/44 series. Samsung has used SDP(Sustainability Data Platform) to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 11 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.10
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML v4.8 (Climate Change:IPCC)
LCA software	SDP(Sustainability Data Platform)

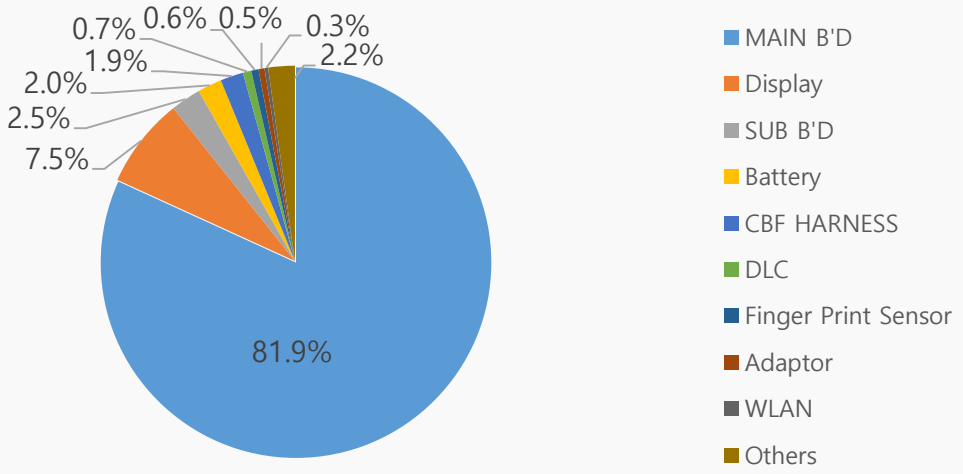
System boundary of LCA

Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics
Distribution	From Vietnam to US
Use	4 years use
Disposal	Waste treatment of parts and material

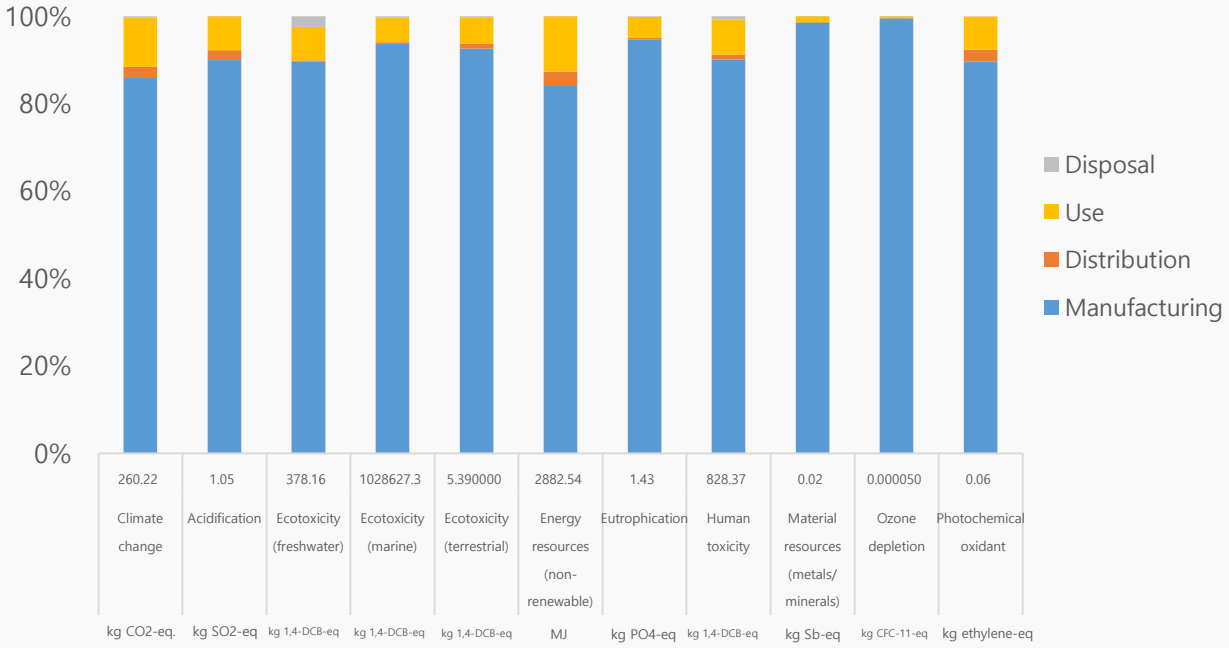
Product Features

Model name	NP750QHA (Galaxy Book5 360 15”)	
Dimension (mm)	355.4 x 228.0 x 13.7	
Display (mm)	396.2	
Weight (g)	Product & Acc.	1,691.55
	Packages	667.22

Global Warming Impact Profile

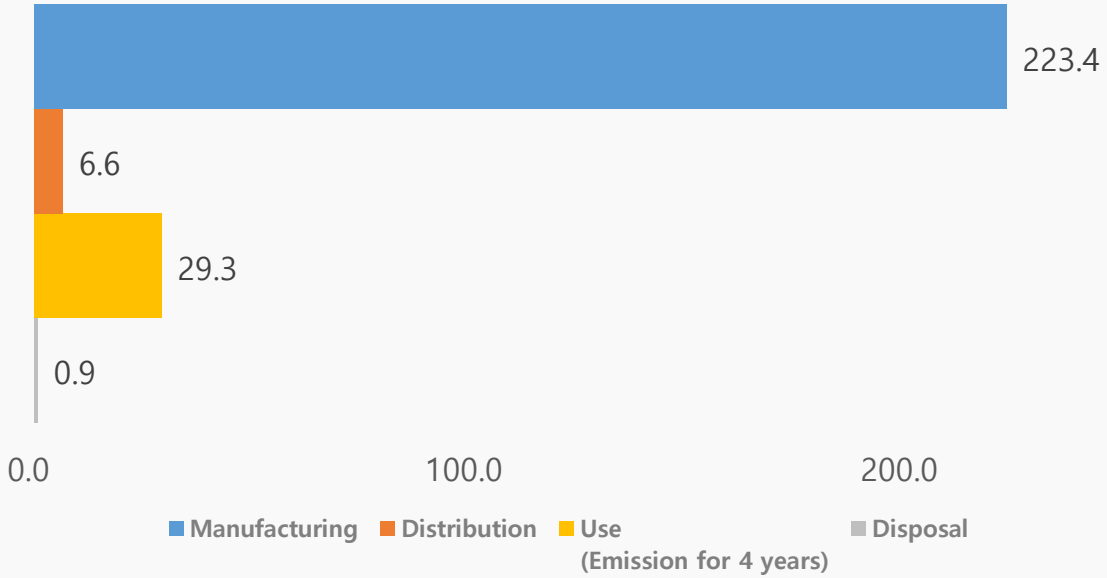


Characterized Environment Impact



Life Cycle Carbon Emissions

Unit : $kgCO_2$ eq.



* The results differ from to region, But not by much.

Life Cycle Assessment for Galaxy Book5 Pro 16(UK)

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; pre-manufacturing; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040/44 series. Samsung has used SDP(Sustainability Data Platform) to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 11 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.10
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML v4.8 (Climate Change:IPCC)
LCA software	SDP(Sustainability Data Platform)

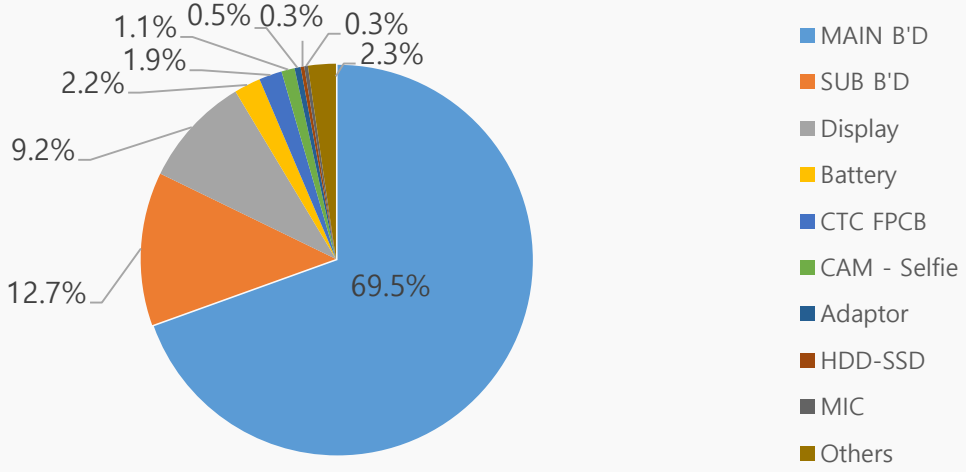
System boundary of LCA

Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics
Distribution	From Vietnam to UK
Use	4 years use
Disposal	Waste treatment of parts and material

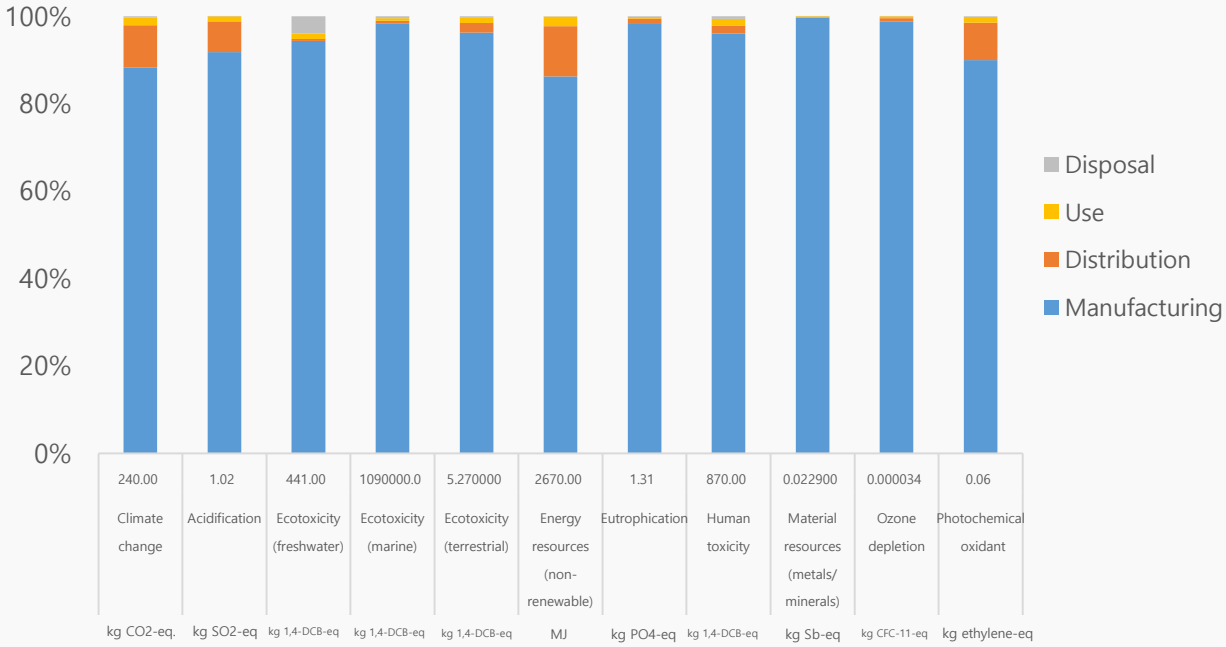
Product Features

Model name	NP960XHA (Galaxy Book5 Pro16)	
Dimension (mm)	355.4 x 250.4 x 12.5	
Display (mm)	406.4	
Weight (g)	Product & Acc.	1752.97
	Packages	1032.08

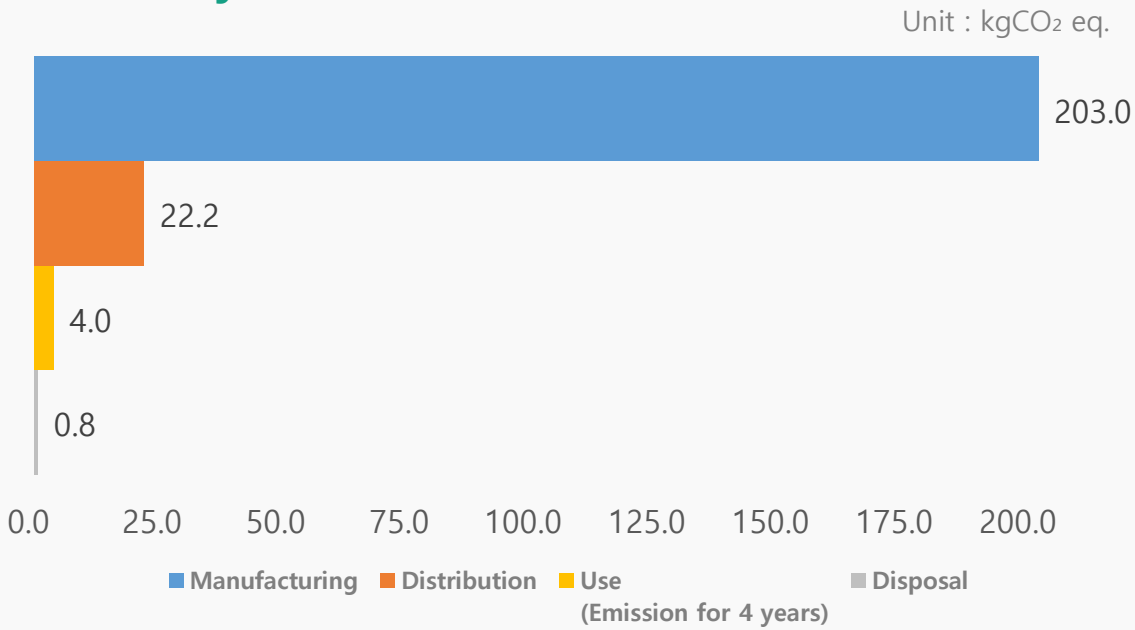
Global Warming Impact Profile



Characterized Environment Impact



Life Cycle Carbon Emissions



* The results differ from to region, But not by much.

Life Cycle Assessment for Galaxy Book5 Pro 16(US)

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; pre-manufacturing; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040/44 series. Samsung has used SDP(Sustainability Data Platform) to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 11 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.10
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML v4.8 (Climate Change:IPCC)
LCA software	SDP(Sustainability Data Platform)

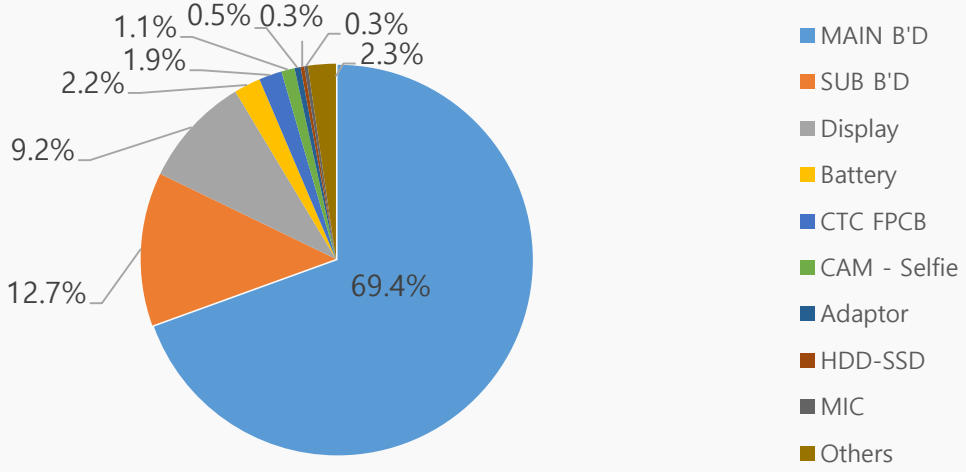
System boundary of LCA

Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics
Distribution	From Vietnam to US
Use	4 years use
Disposal	Waste treatment of parts and material

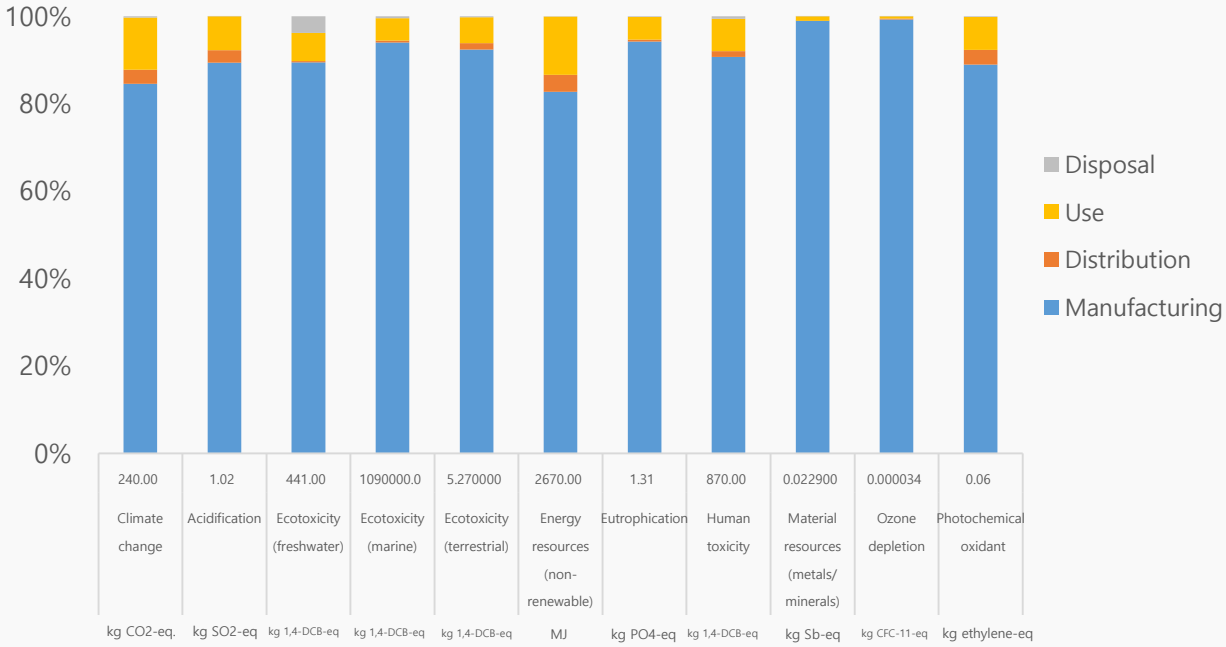
Product Features

Model name	NP960XHA (Galaxy Book5 Pro16)	
Dimension (mm)	355.4 x 250.4 x 12.5	
Display (mm)	406.4	
Weight (g)	Product & Acc.	1754.05
	Packages	1032.07

Global Warming Impact Profile

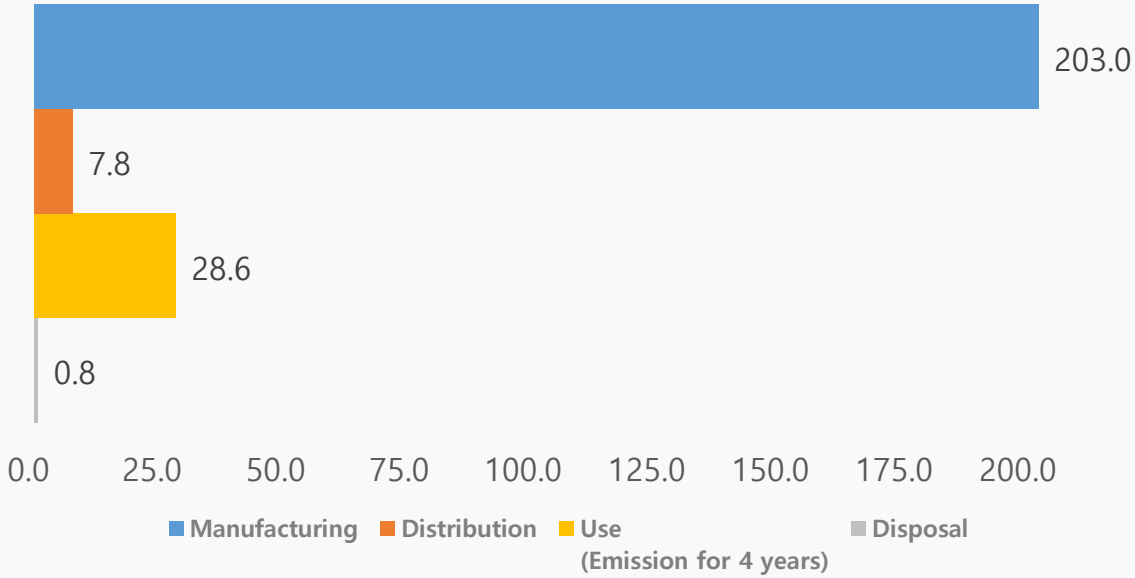


Characterized Environment Impact



Life Cycle Carbon Emissions

Unit : $kgCO_2$ eq.



* The results differ from to region, But not by much.

Life Cycle Assessment for Galaxy Book5 Pro 14(UK)

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; pre-manufacturing; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040/44 series. Samsung has used SDP(Sustainability Data Platform) to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 11 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.10
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML v4.8 (Climate Change:IPCC)
LCA software	SDP(Sustainability Data Platform)

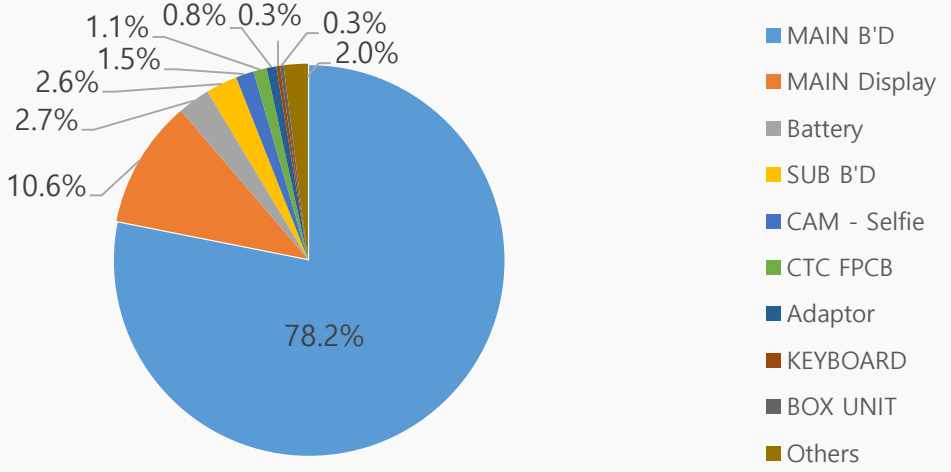
System boundary of LCA

Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics
Distribution	From Vietnam to UK
Use	4 years use
Disposal	Waste treatment of parts and material

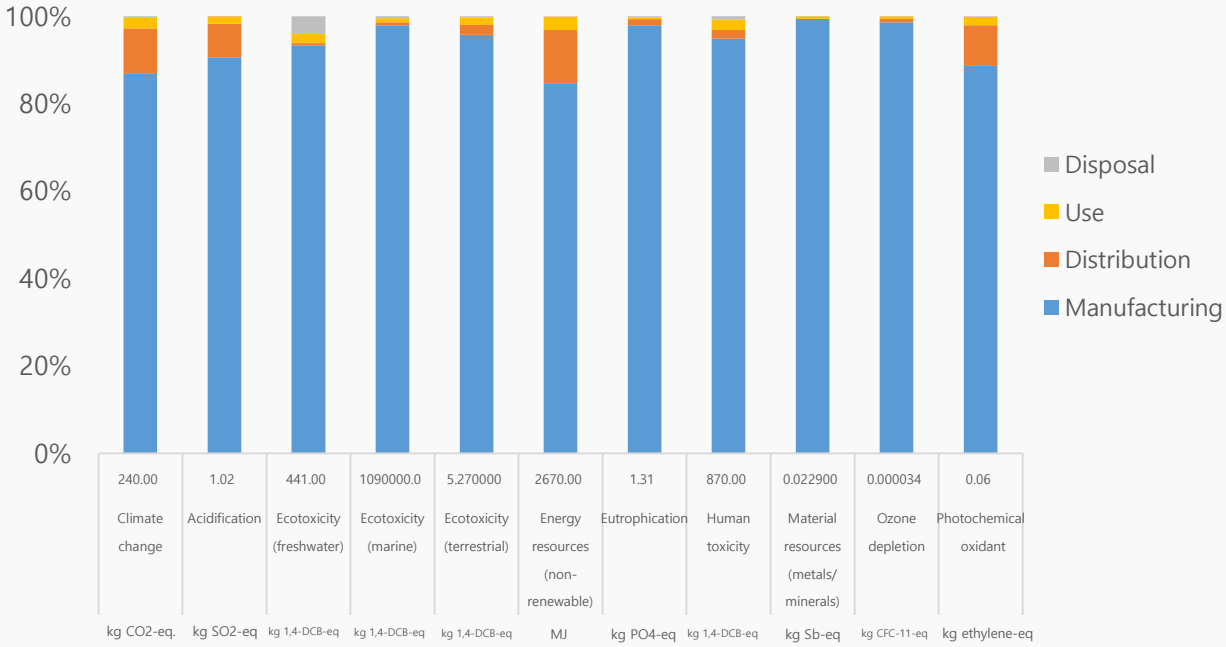
Product Features

Model name	NT940XHA (Galaxy Book5 Pro14)	
Dimension (mm)	312.3 x 223.8 x 11.6	
Display (mm)	355.6	
Weight (g)	Product & Acc.	1415.16
	Packages	857.58

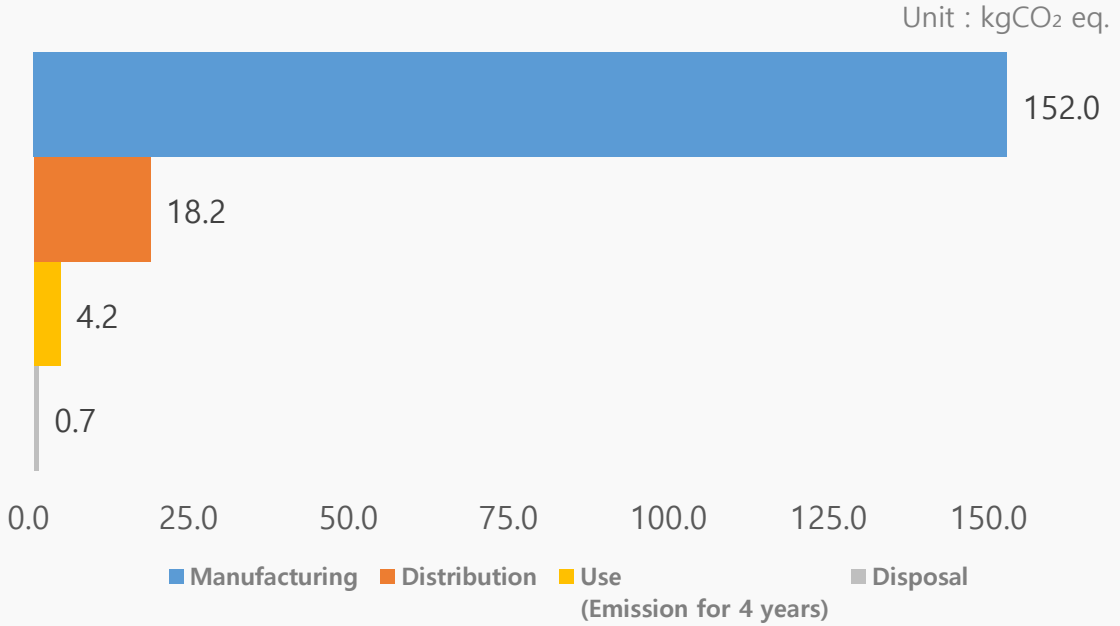
Global Warming Impact Profile



Characterized Environment Impact



Life Cycle Carbon Emissions



* The results differ from to region, But not by much.

Life Cycle Assessment for Galaxy Book5 Pro 14(US)

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; pre-manufacturing; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040/44 series. Samsung has used SDP(Sustainability Data Platform) to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 11 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.10
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML v4.8 (Climate Change:IPCC)
LCA software	SDP(Sustainability Data Platform)

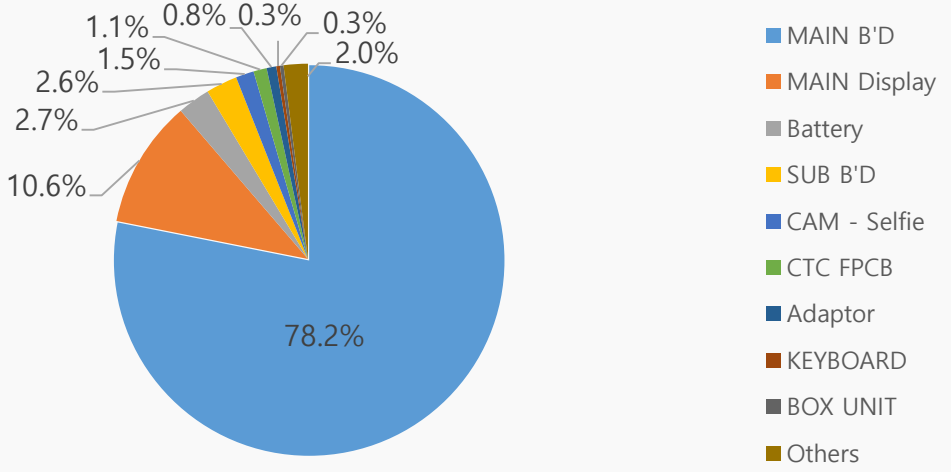
System boundary of LCA

Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics
Distribution	From Vietnam to US
Use	4 years use
Disposal	Waste treatment of parts and material

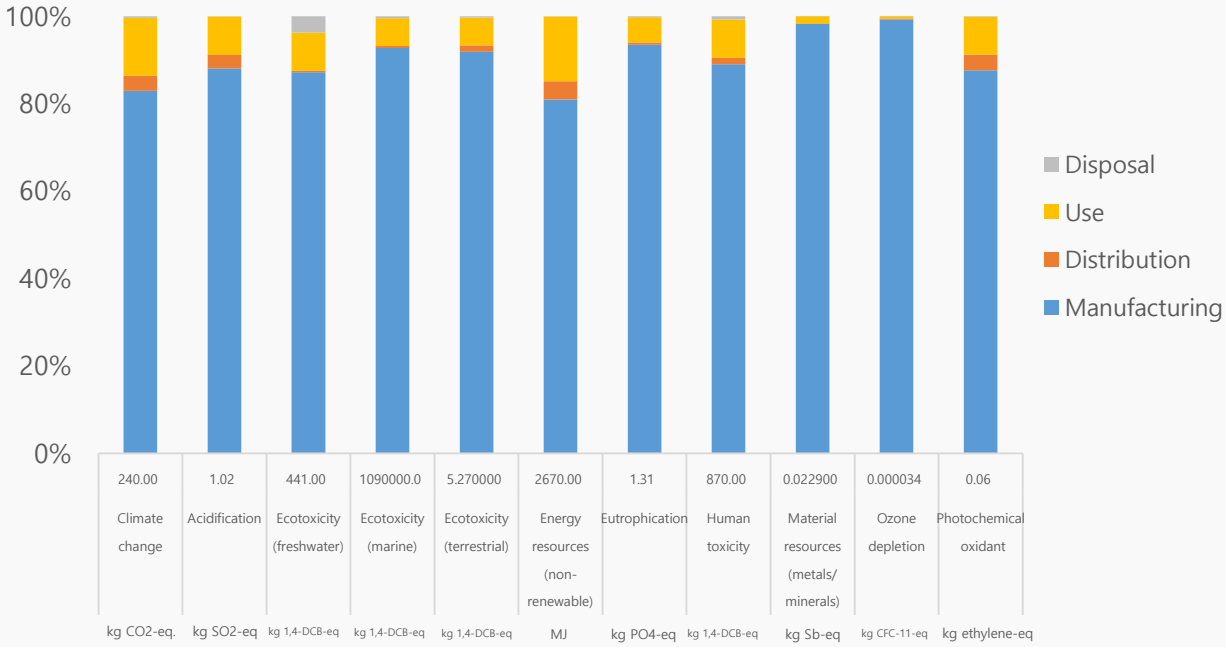
Product Features

Model name	NT940XHA (Galaxy Book5 Pro14)	
Dimension (mm)	312.3 x 223.8 x 11.6	
Display (mm)	355.6	
Weight (g)	Product & Acc.	1408.45
	Packages	856.46

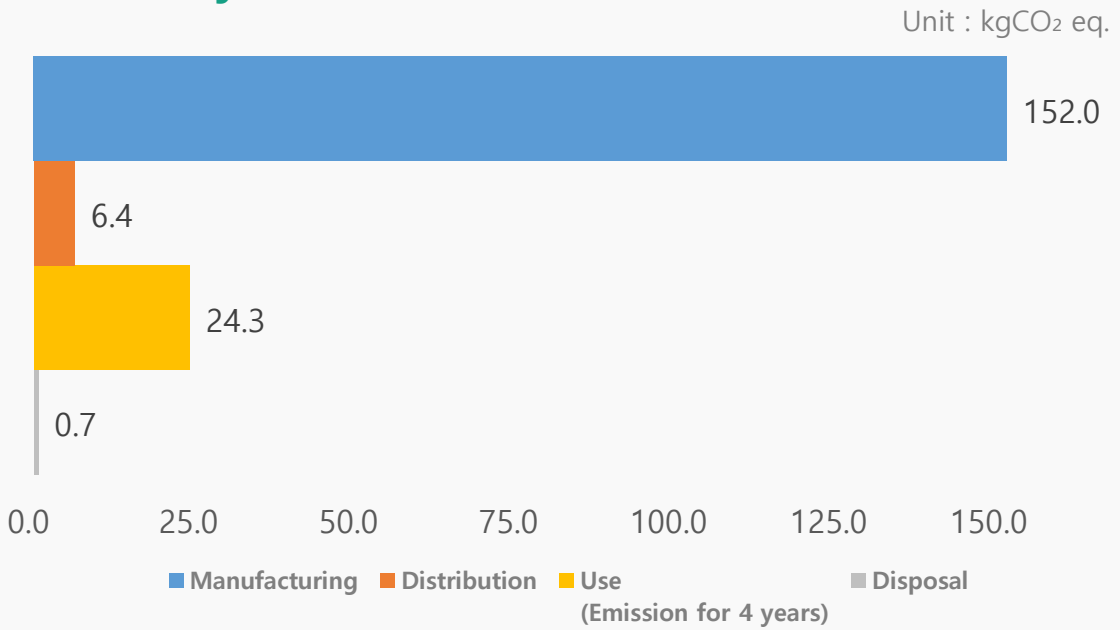
Global Warming Impact Profile



Characterized Environment Impact



Life Cycle Carbon Emissions



* The results differ from to region, But not by much.

Life Cycle Assessment for Galaxy Chromebook+

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; pre-manufacturing; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040/44 series. Samsung has used SDP(Sustainability Data Platform) to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 11 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.10
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML v4.8 (Climate Change:IPCC)
LCA software	SDP(Sustainability Data Platform)

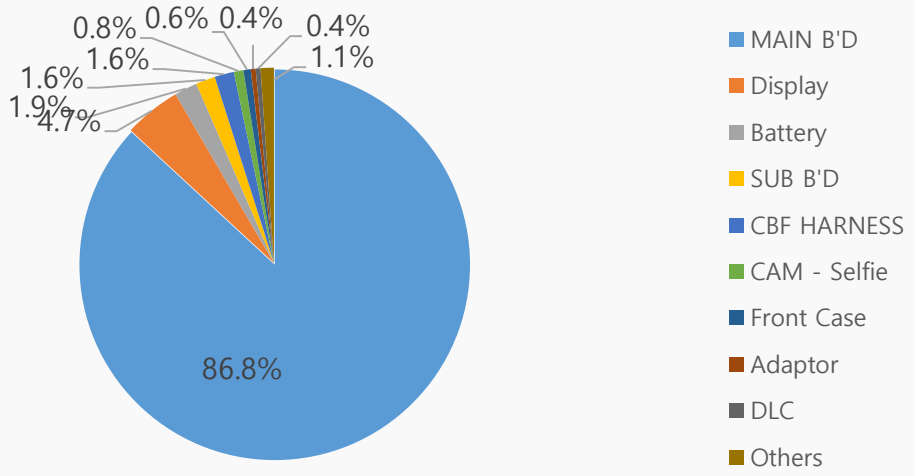
System boundary of LCA

Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics
Distribution	From Vietnam to US
Use	4 years use
Disposal	Waste treatment of parts and material

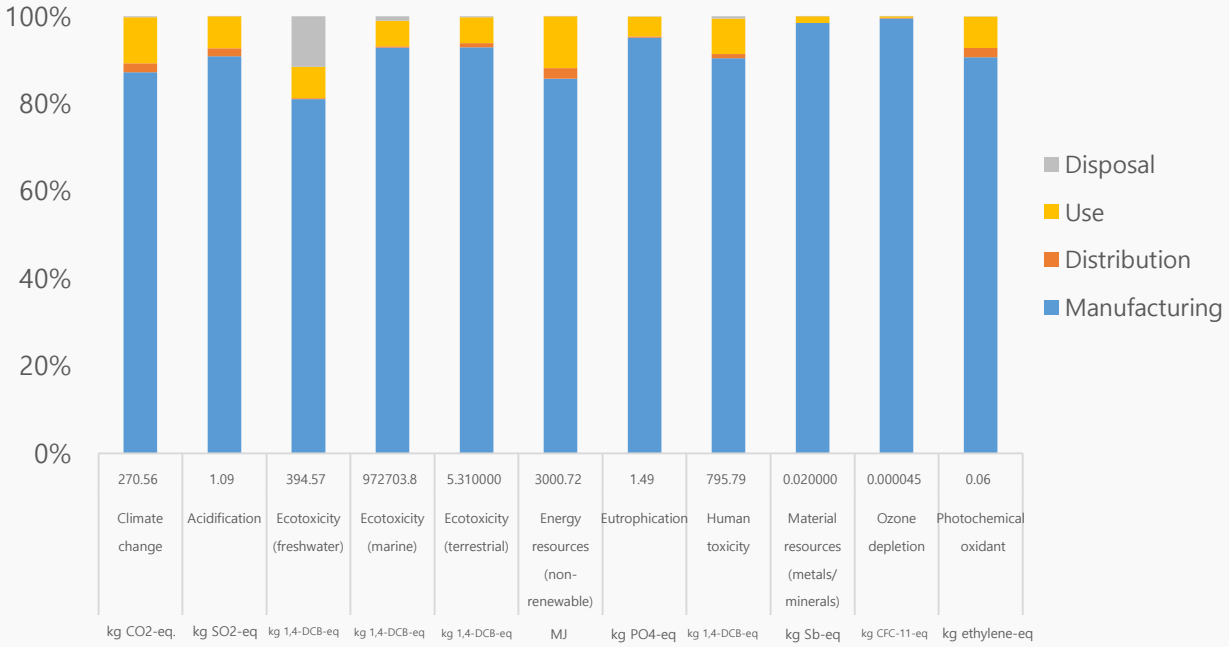
Product Features

Model name	XE550XGA (Galaxy Chromebook+)	
Dimension (mm)	225.8 x 355.4 x 11.8	
Display (mm)	396.2	
Weight (g)	Product & Acc.	1,305.30
	Packages	639.38

Global Warming Impact Profile

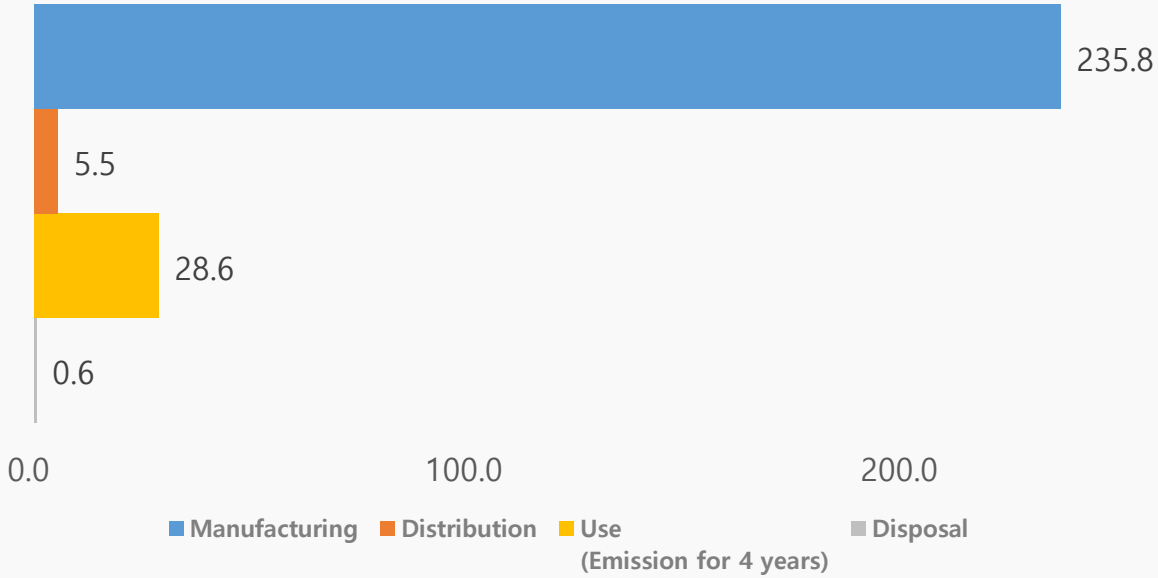


Characterized Environment Impact



Life Cycle Carbon Emissions

Unit : $kgCO_2$ eq.



* The results differ from to region, But not by much.

Life Cycle Assessment for Galaxy Book5 Pro 360(UK)

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; pre-manufacturing; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040/44 series. Samsung has used SDP(Sustainability Data Platform) to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 11 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.10
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML v4.8 (Climate Change:IPCC)
LCA software	SDP(Sustainability Data Platform)

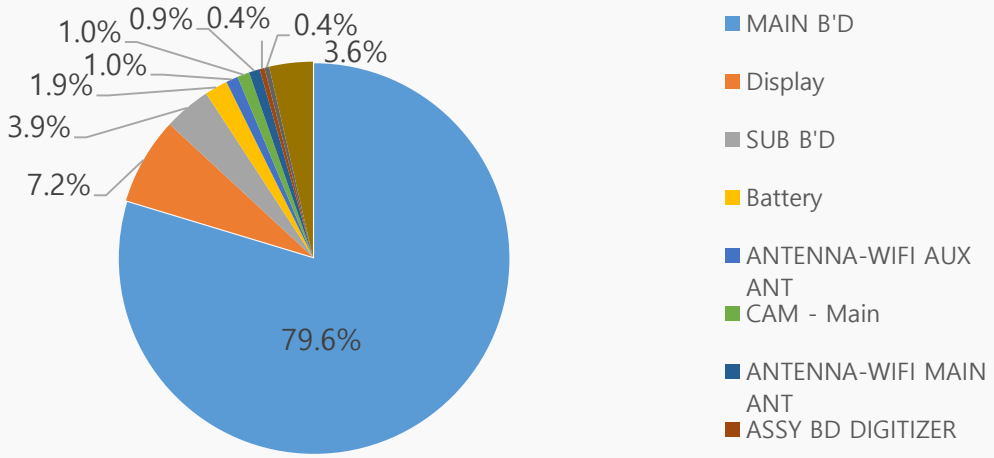
System boundary of LCA

Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics
Distribution	From Vietnam to US
Use	4 years use
Disposal	Waste treatment of parts and material

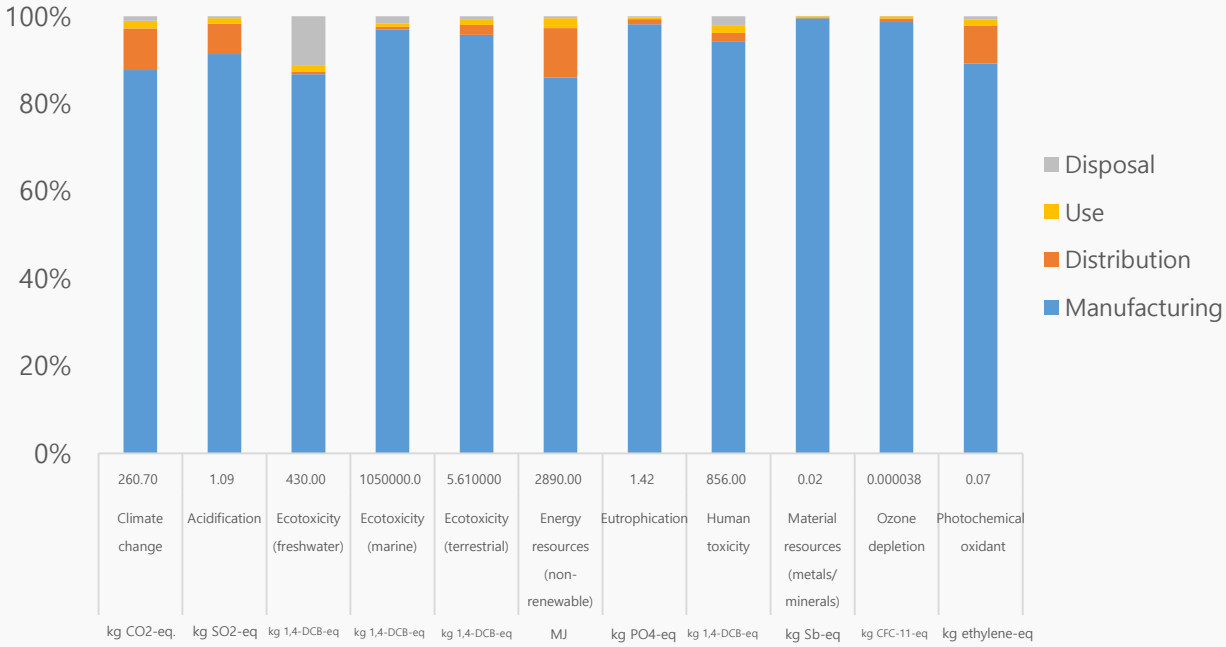
Product Features

Model name	NP960QHA (Galaxy Book5 Pro 360)	
Dimension (mm)	355.4 x 252.2 x 12.8	
Display (mm)	400.6	
Weight (g)	Product & Acc.	1,841.68
	Packages	1,327.77

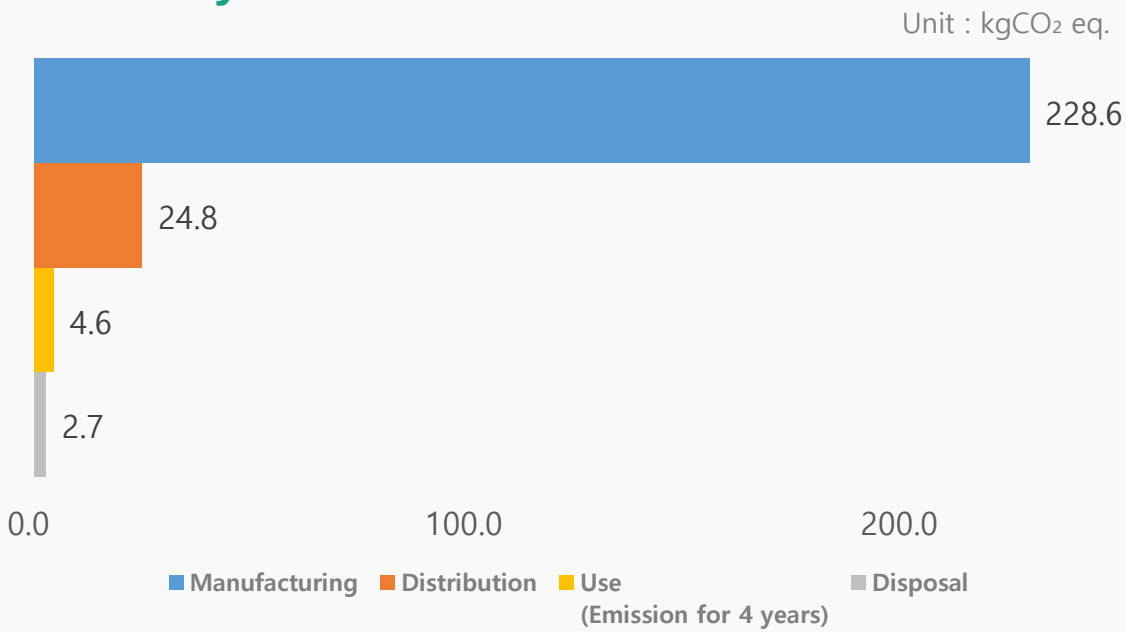
Global Warming Impact Profile



Characterized Environment Impact



Life Cycle Carbon Emissions



* The results differ from to region, But not by much.

Life Cycle Assessment for Galaxy Book4 Edge (US)

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; pre-manufacturing; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040/44 series. Samsung has used SDP(Sustainability Data Platform) to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 11 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.10
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML v4.8 (Climate Change:IPCC)
LCA software	SDP(Sustainability Data Platform)

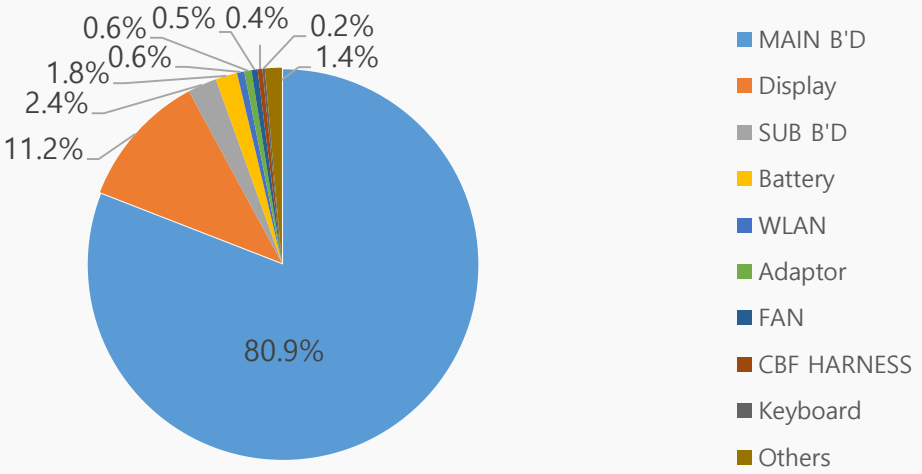
System boundary of LCA

Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics
Distribution	From Vietnam to US
Use	4 years use
Disposal	Waste treatment of parts and material

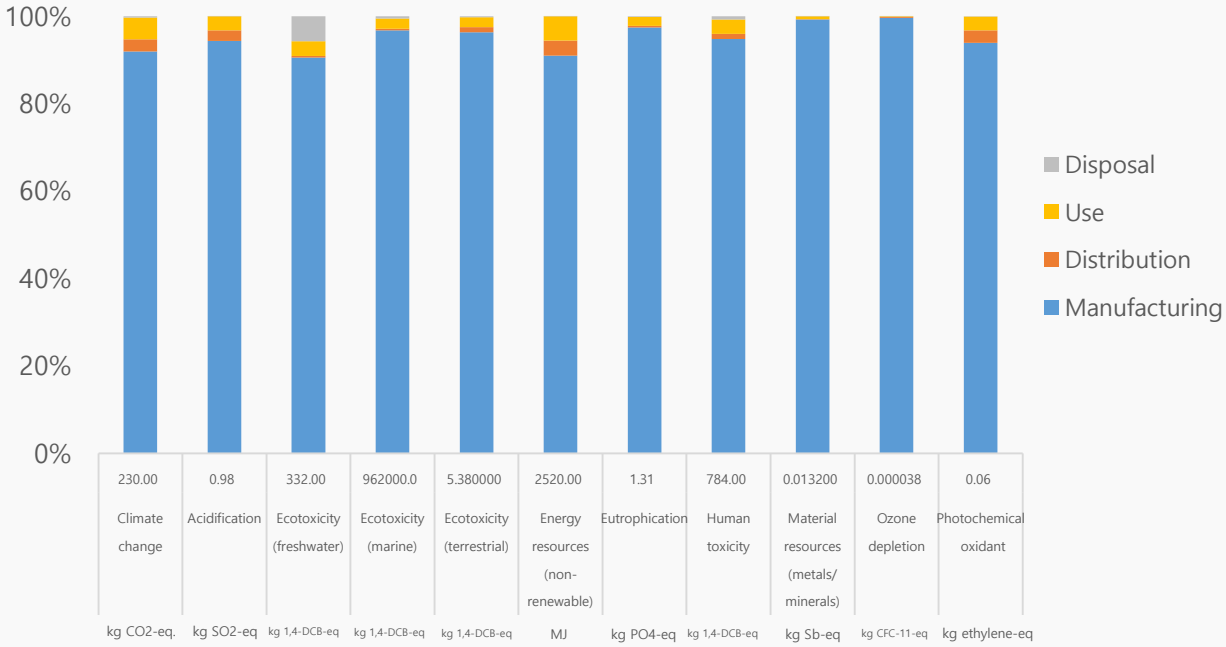
Product Features

Model name	NP750XQA (Galaxy Book4 Edge)	
Dimension (mm)	356.6 x 229.75 x 15.0	
Display (mm)	396.24	
Weight (g)	Product & Acc.	1,668.56
	Packages	654.24

Global Warming Impact Profile

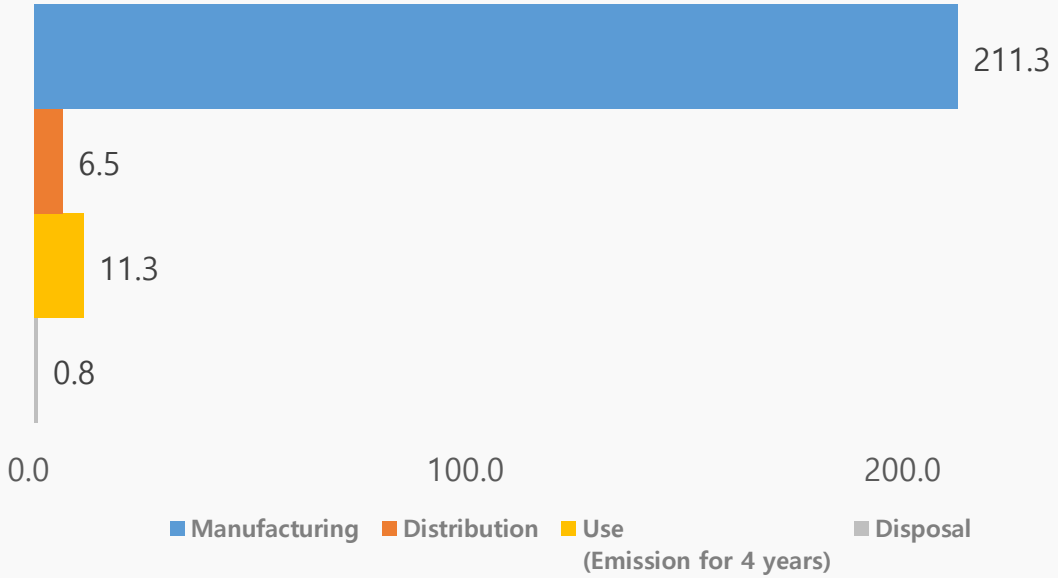


Characterized Environment Impact



Life Cycle Carbon Emissions

Unit : $kgCO_2$ eq.



* The results differ from to region, But not by much.

Life Cycle Assessment for Galaxy Book4 Edge 16"

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; pre-manufacturing; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040 series. Samsung has used SimaPro 9.6.0.1 software and a dedicated LCA S/W database to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 10 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.10
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML-IA baseline V3.09 / the Netherlands, 1997 as provided in the SimaPro 9.6.0.1 LCA tool
LCA software	SimaPro 9.6.0.1

System boundary of LCA

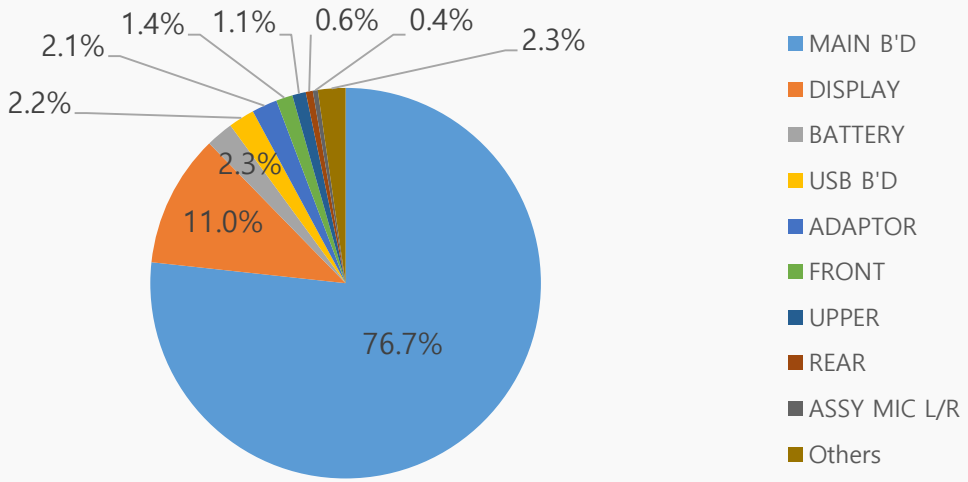
Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics
Distribution	From Vietnam to US
Use	4 years use
Disposal	Waste treatment of parts and material

Critical review for LCA study was done by internal expert in Circular Economy Lab of Samsung Electronics. (ecodesign@samsung.com)

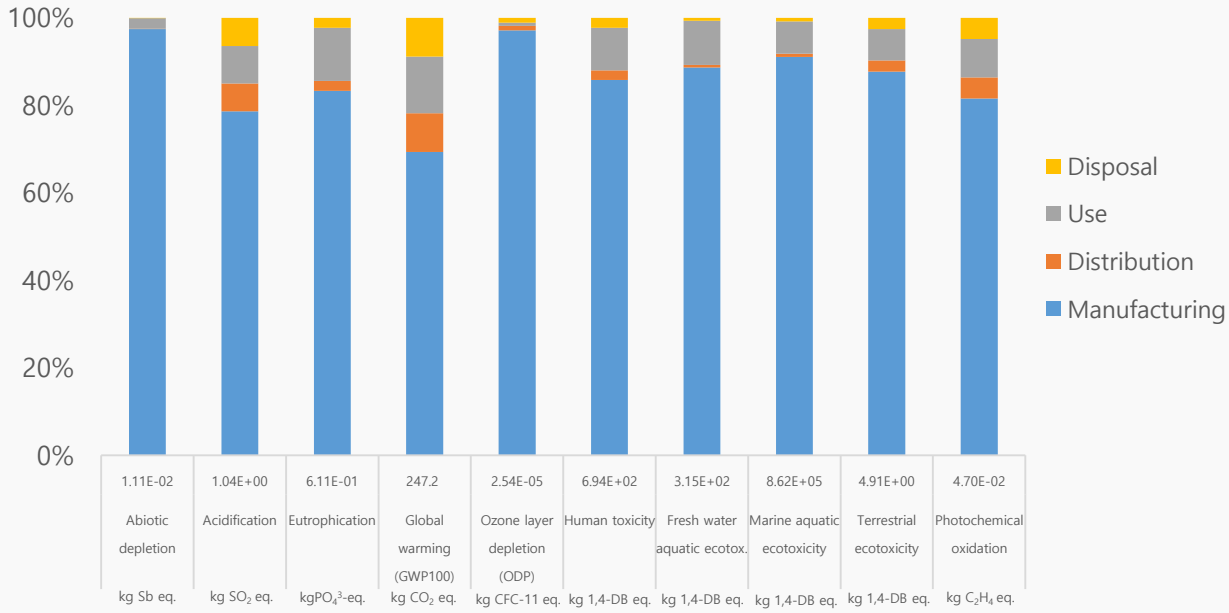
Product Features

Model name	NP960XMA
Dimension	355.4 x 250.4 x 12.3 mm
Display	16” AMOLED
Weight	Product&Acc. : 1709.91 g Packages : 897.04 g
Energy consumption	17.55 kWh / year

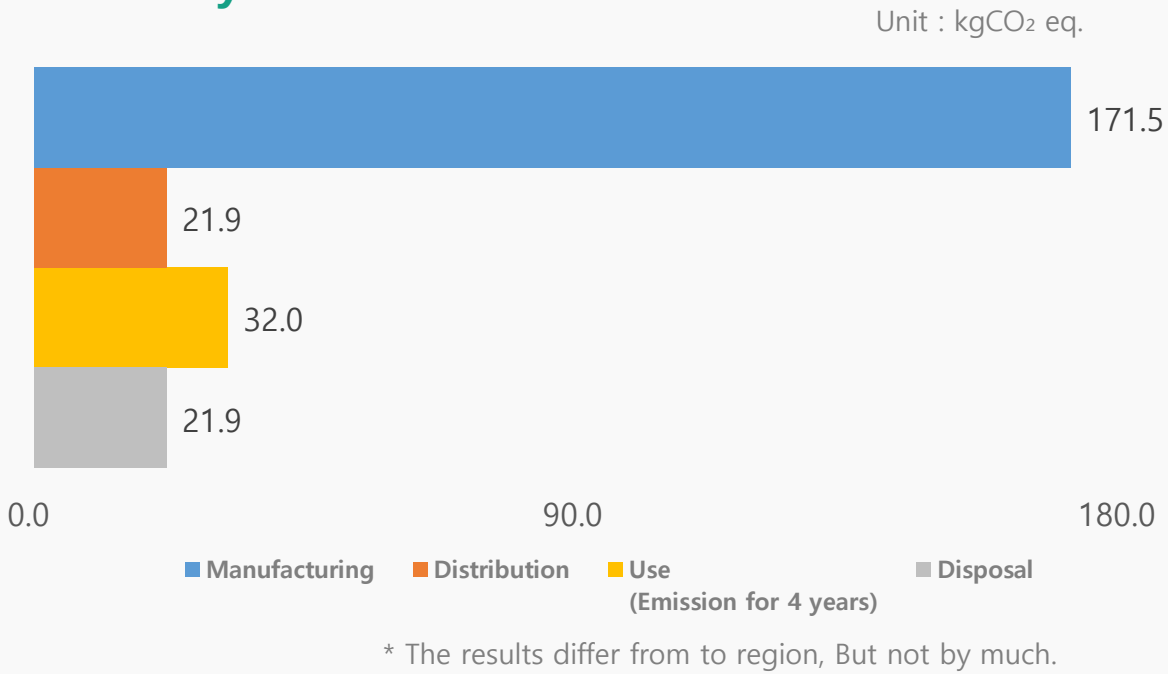
Global Warming Impact Profile



Characterized Environment Impact



Life Cycle Carbon Emissions



* The results differ from to region, But not by much.

Life Cycle Assessment for Galaxy Book4 Edge 14"

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; pre-manufacturing; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040 series. Samsung has used SimaPro 9.6.0.1 software and a dedicated LCA S/W database to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 10 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.10
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML-IA baseline V3.09 / the Netherlands, 1997 as provided in the SimaPro 9.6.0.1 LCA tool
LCA software	SimaPro 9.6.0.1

System boundary of LCA

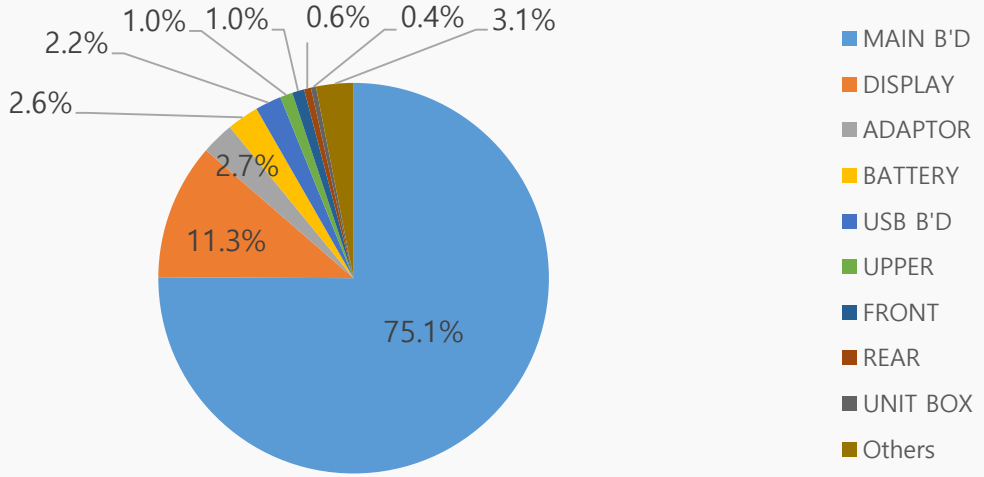
Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics
Distribution	From Vietnam to US
Use	4 years use
Disposal	Waste treatment of parts and material

Critical review for LCA study was done by internal expert in Circular Economy Lab of Samsung Electronics. (ecodesign@samsung.com)

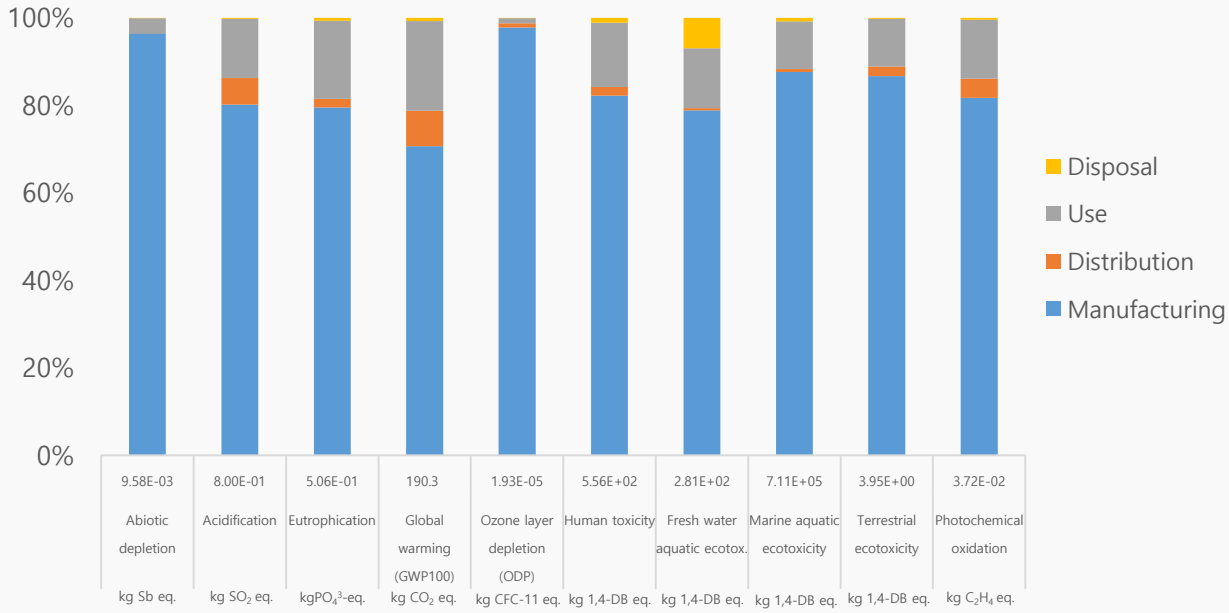
Product Features

Model name	NP940XMA
Dimension	312.3 x 223.8 x 10.9 mm
Display	14” AMOLED
Weight	Product&Acc. : 1322.77 g Packages : 825.45 g
Energy consumption	16.45 kWh / year

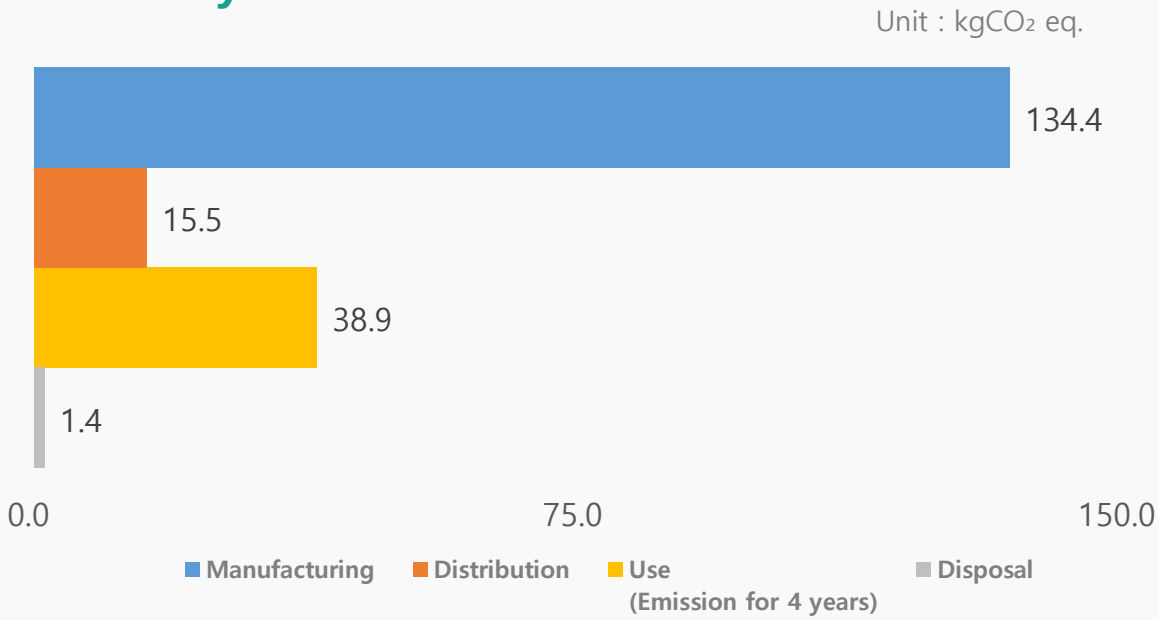
Global Warming Impact Profile



Characterized Environment Impact



Life Cycle Carbon Emissions



* The results differ from to region, But not by much.

Life Cycle Assessment for Galaxy Book4 360

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; pre-manufacturing; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040 series. Samsung has used SimaPro 9.5.0.0 software and a dedicated LCA S/W database to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 10 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.9.1
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML-IA baseline V3.09 / the Netherlands, 1997 as provided in the SimaPro 9.5.0.0 LCA tool
LCA software	SimaPro 9.5.0.0

System boundary of LCA

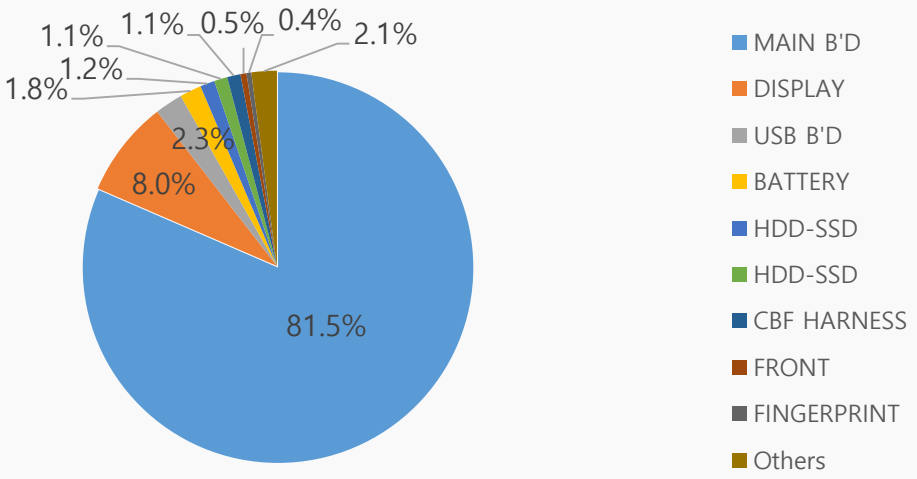
Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics
Distribution	From Vietnam to United States
Use	4 years use
Disposal	Waste treatment of parts and material

Critical review for LCA study was done by internal expert in Global CS Center of Samsung Electronics. (ecodesign@samsung.com)

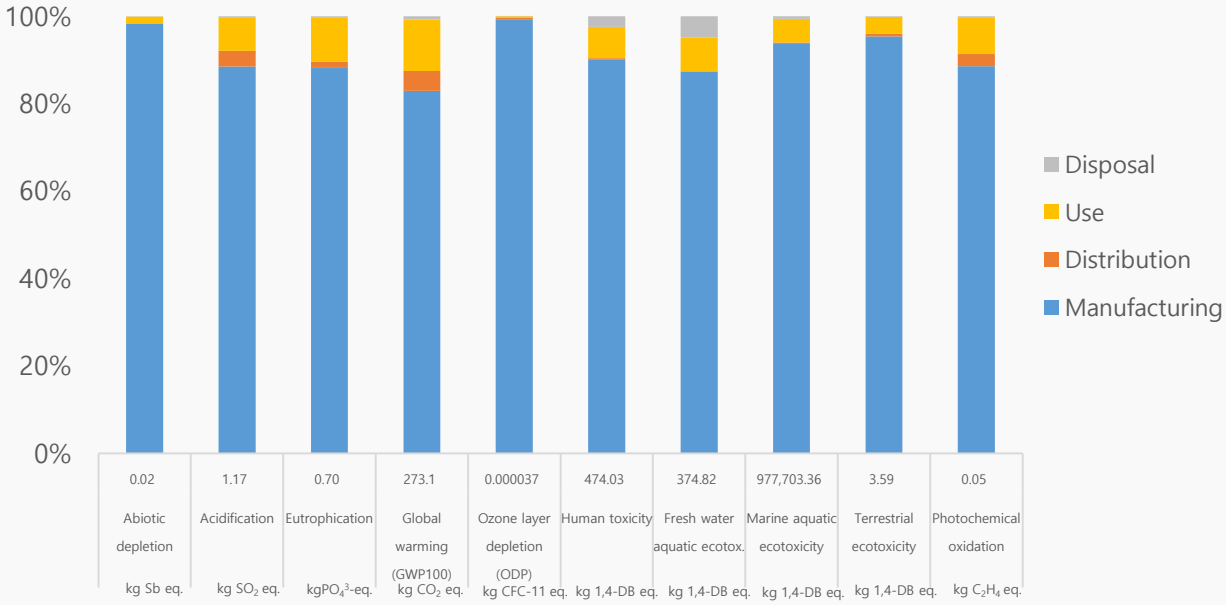
Product Features

Model name	NP750QGK
Dimension	355.4 x 228.0 x 13.7 mm
Display	15.6" AMOLED
Weight	Product & Acc. : 1624.17g Packages : 666.42g
Energy consumption	16.73 kWh / year

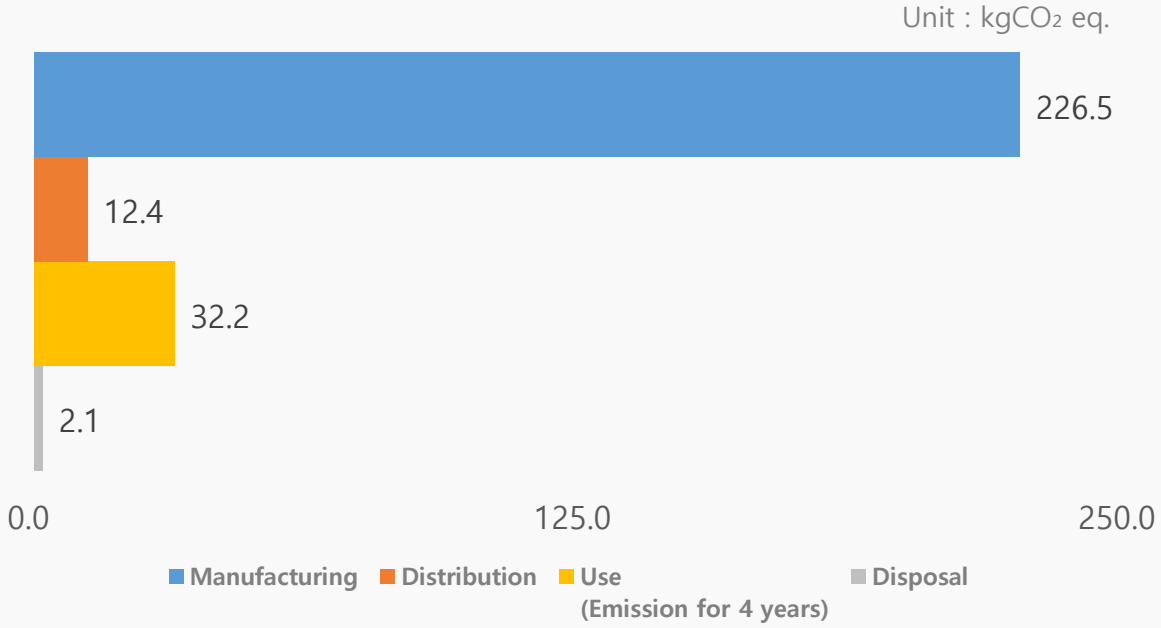
Global Warming Impact Profile



Characterized Environment Impact



Life Cycle Carbon Emissions



* The results differ from to region, But not by much.

Life Cycle Assessment for Galaxy Book4 Pro 14"

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; pre-manufacturing; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040 series. Samsung has used SimaPro 9.5.0.0 software and a dedicated LCA S/W database to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 10 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.9.1
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML-IA baseline V3.09 / the Netherlands, 1997 as provided in the SimaPro 9.5.0.0 LCA tool
LCA software	SimaPro 9.5.0.0

System boundary of LCA

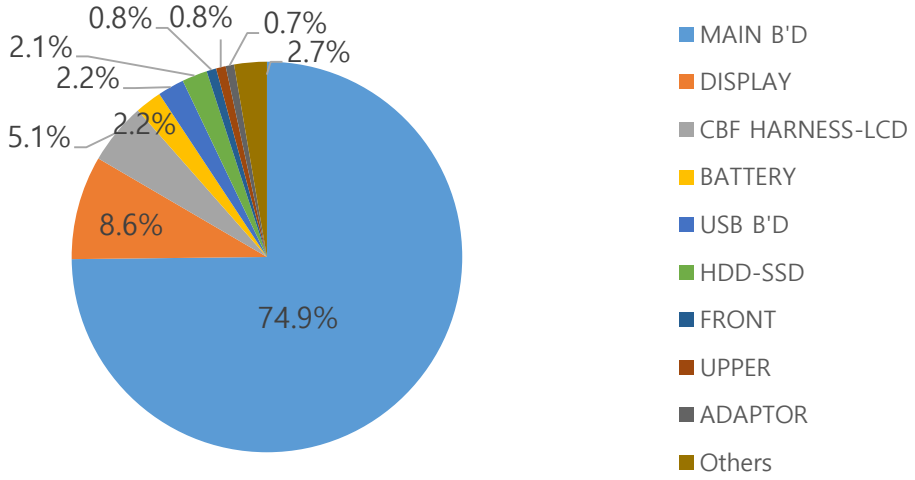
Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics Vietnam
Distribution	From Vietnam to United States
Use	4 years use
Disposal	Waste treatment of parts and material

Critical review for LCA study was done by internal expert in Global CS Center of Samsung Electronics. (ecodesign@samsung.com)

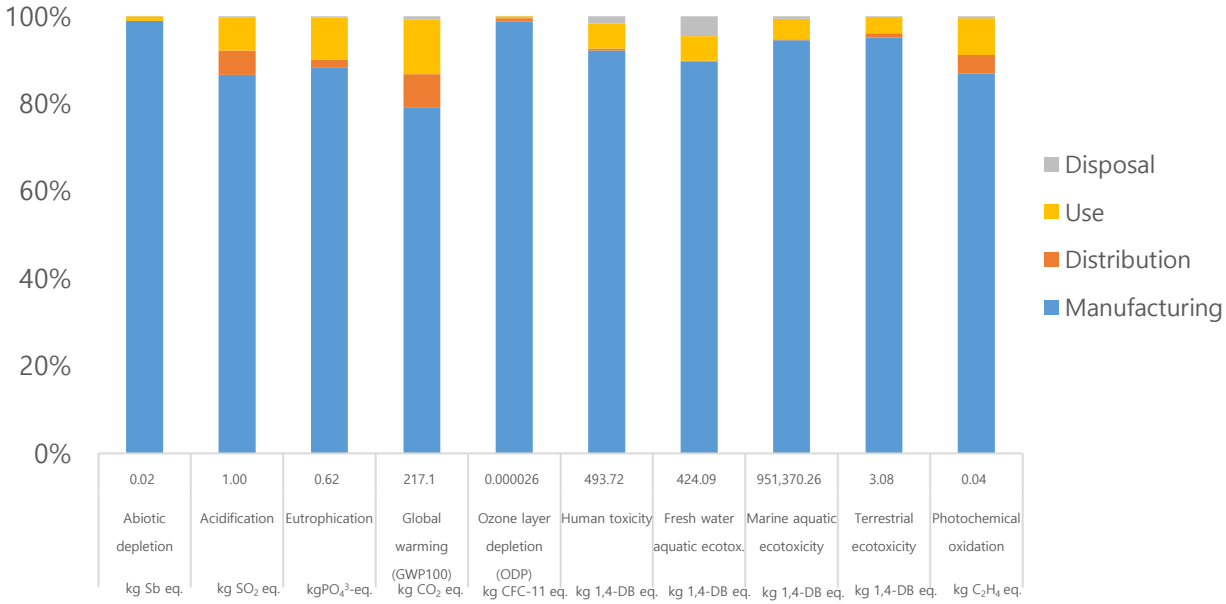
Product Features

Model name	NP940XGK
Dimension	312.3 x 223.8 x 11.6 mm
Display	14.0" AMOLED
Weight	Product & Acc. : 1402.92g Packages : 801.59g
Energy consumption	14.14 kWh / year

Global Warming Impact Profile

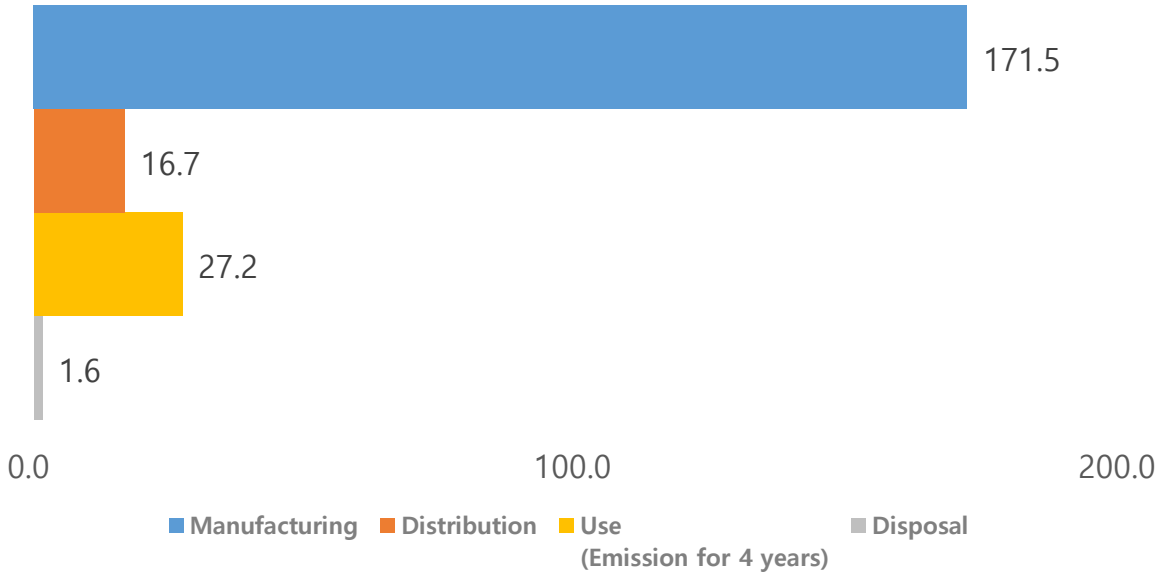


Characterized Environment Impact



Life Cycle Carbon Emissions

Unit : $kgCO_2$ eq.



* The results differ from to region, But not by much.

Life Cycle Assessment for Galaxy Book4 Pro 16"

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; pre-manufacturing; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040 series. Samsung has used SimaPro 9.5.0.0 software and a dedicated LCA S/W database to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 10 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.9.1
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML-IA baseline V3.09 / the Netherlands, 1997 as provided in the SimaPro 9.5.0.0 LCA tool
LCA software	SimaPro 9.5.0.0

System boundary of LCA

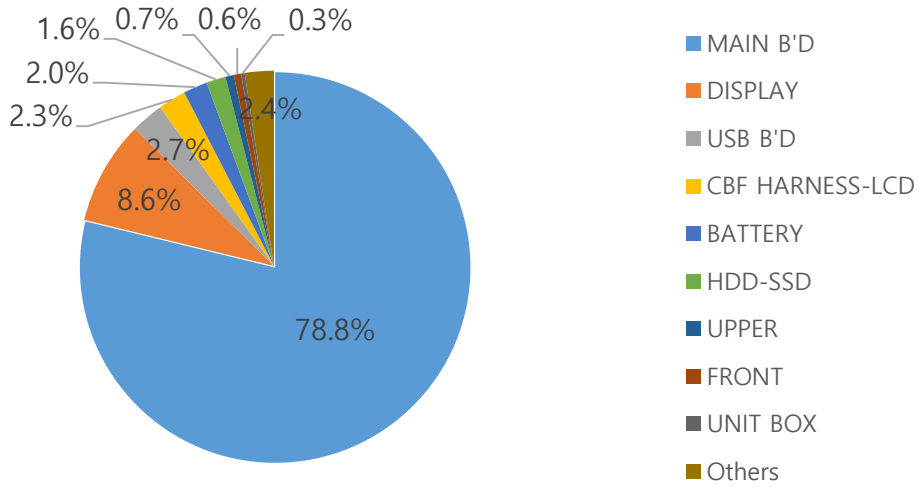
Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics Vietnam
Distribution	From Vietnam to United States
Use	4 years use
Disposal	Waste treatment of parts and material

Critical review for LCA study was done by internal expert in Global CS Center of Samsung Electronics. (ecodesign@samsung.com)

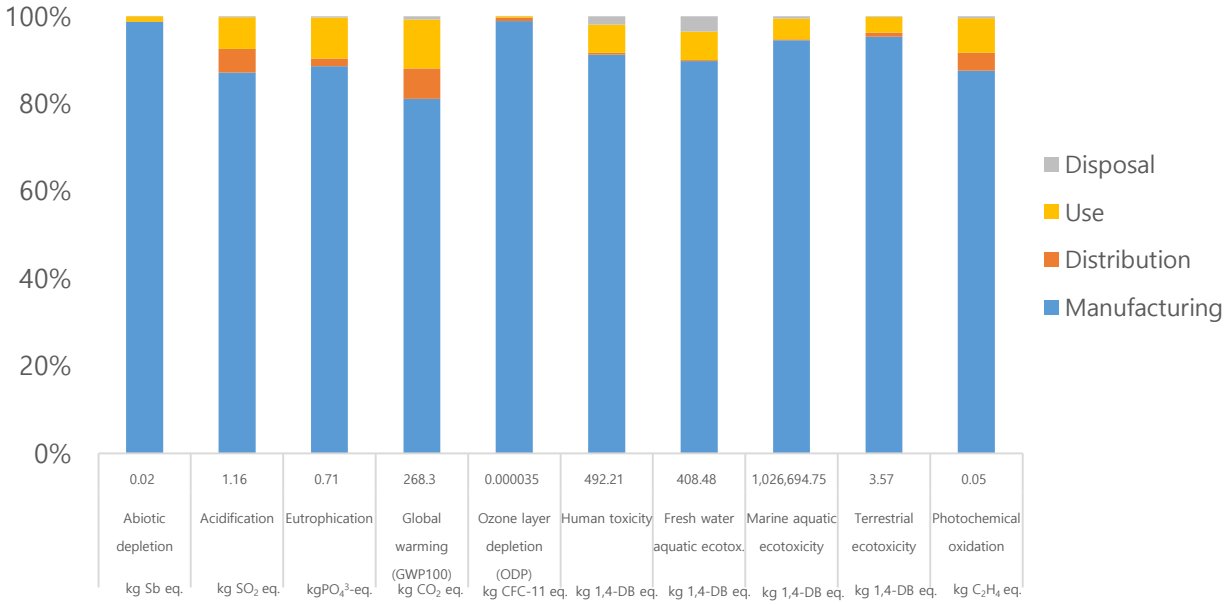
Product Features

Model name	NP960XGK
Dimension	355.4 x 250.4 x 12.5 mm
Display	16.0" AMOLED
Weight	Product & Acc. : 1723.70g Packages : 1086.63g
Energy consumption	15.63 kWh / year

Global Warming Impact Profile

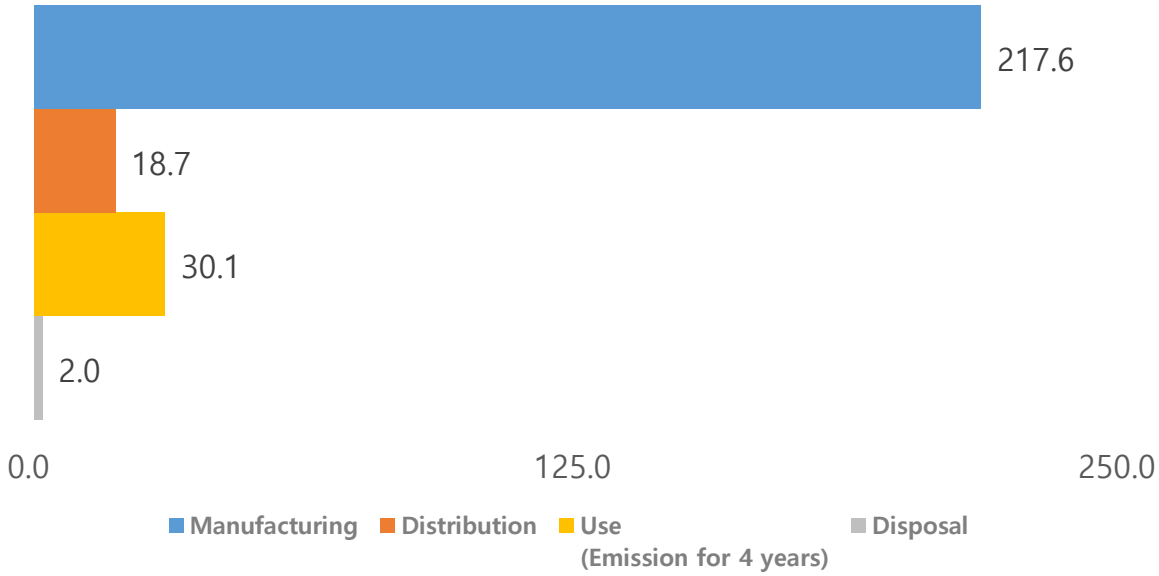


Characterized Environment Impact



Life Cycle Carbon Emissions

Unit : $kgCO_2$ eq.



* The results differ from to region, But not by much.

Life Cycle Assessment for Galaxy Book4 Ultra

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; pre-manufacturing; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040 series. Samsung has used SimaPro 9.5.0.0 software and a dedicated LCA S/W database to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 10 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.9.1
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML-IA baseline V3.09 / the Netherlands, 1997 as provided in the SimaPro 9.5.0.0 LCA tool
LCA software	SimaPro 9.5.0.0

System boundary of LCA

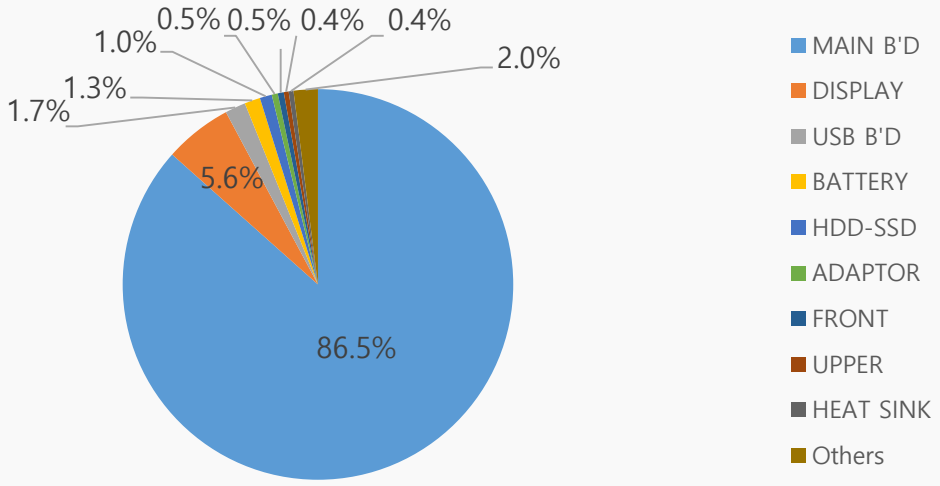
Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics
Distribution	From Vietnam to United States
Use	4 years use
Disposal	Waste treatment of parts and material

Critical review for LCA study was done by internal expert in Global CS Center of Samsung Electronics. (ecodesign@samsung.com)

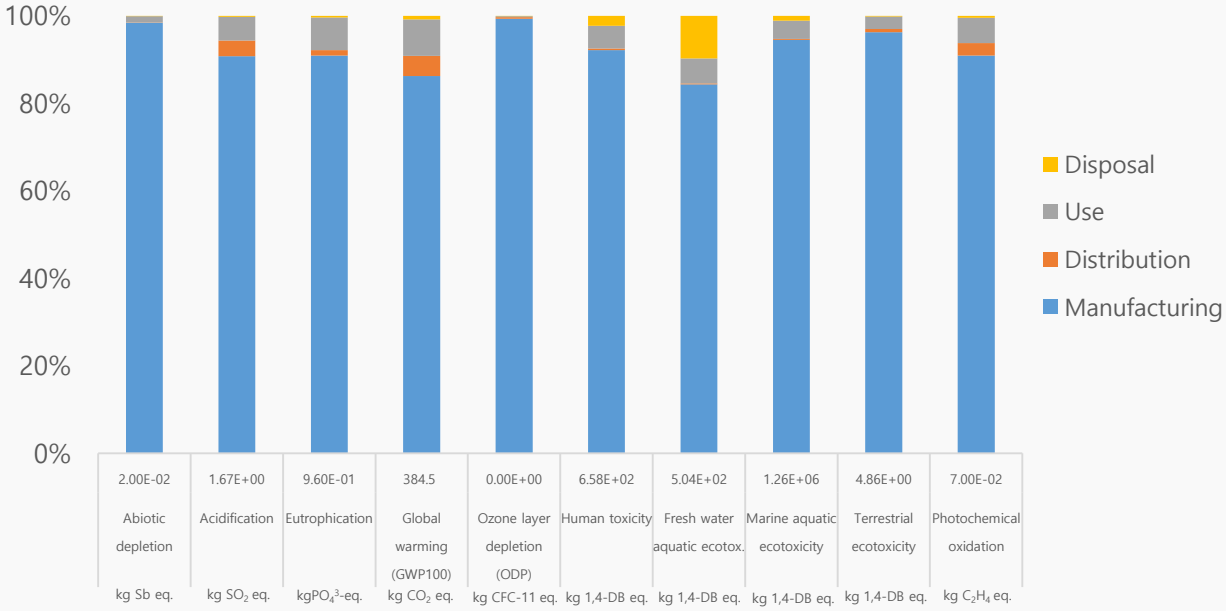
Product Features

Model name	NP960XGL
Dimension	355.40 x 250.45 x 16.5 mm
Display	16" WQXGA+, AMOLED
Weight	Product & Acc. : 2194.43g Packages : 1,771.70g
Energy consumption	16.74 kWh / year

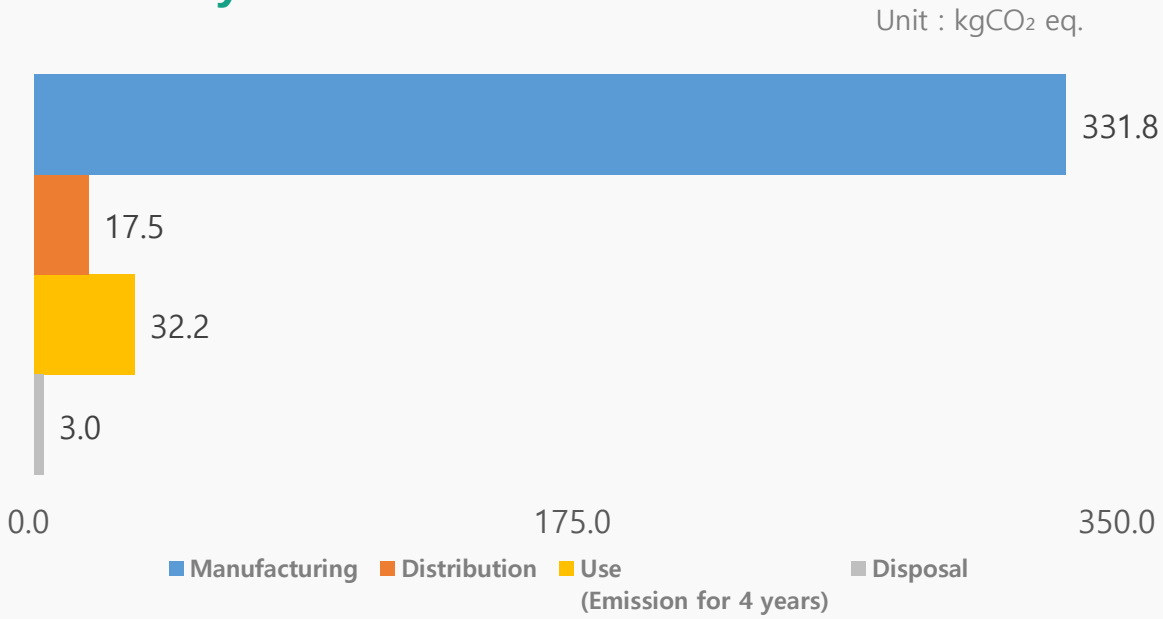
Global Warming Impact Profile



Characterized Environment Impact



Life Cycle Carbon Emissions



* The results differ from to region, But not by much.

Life Cycle Assessment for Galaxy Book4 Pro 360

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; pre-manufacturing; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040 series. Samsung has used SimaPro 9.5.0.0 software and a dedicated LCA S/W database to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 10 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.9.1
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML-IA baseline V3.09 / the Netherlands, 1997 as provided in the SimaPro 9.5.0.0 LCA tool
LCA software	SimaPro 9.5.0.0

System boundary of LCA

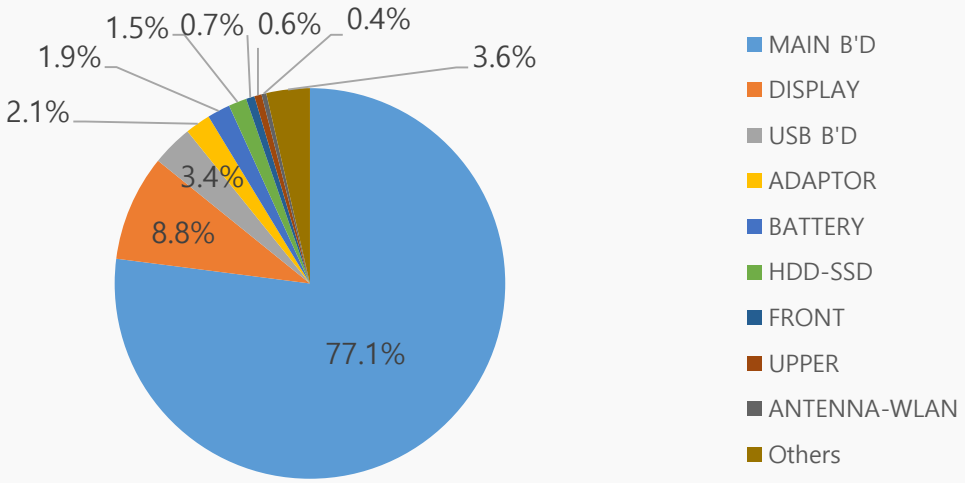
Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics
Distribution	From Vietnam to United States
Use	4 years use
Disposal	Waste treatment of parts and material

Critical review for LCA study was done by internal expert in Global CS Center of Samsung Electronics. (ecodesign@samsung.com)

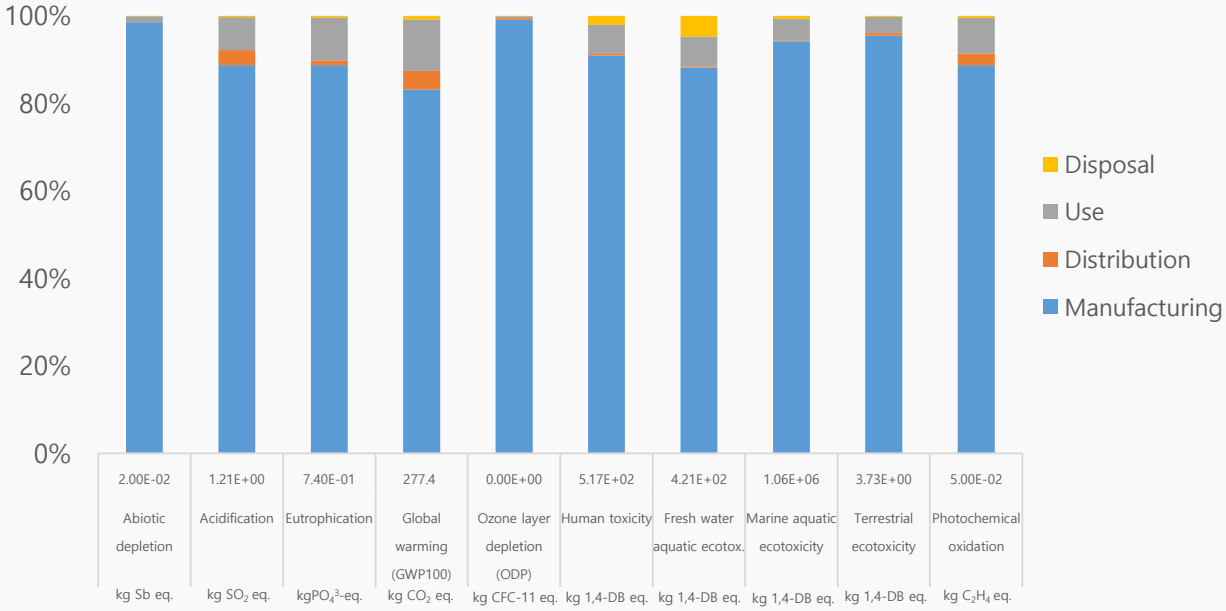
Product Features

Model name	NP960QGK
Dimension	355.4 x 252.2 x 12.8 mm
Display	16" WQXGA+, AMOLED
Weight	Product & Acc. : 1,835.96g Packages : 1,042.96g
Energy consumption	16.97 kWh / year

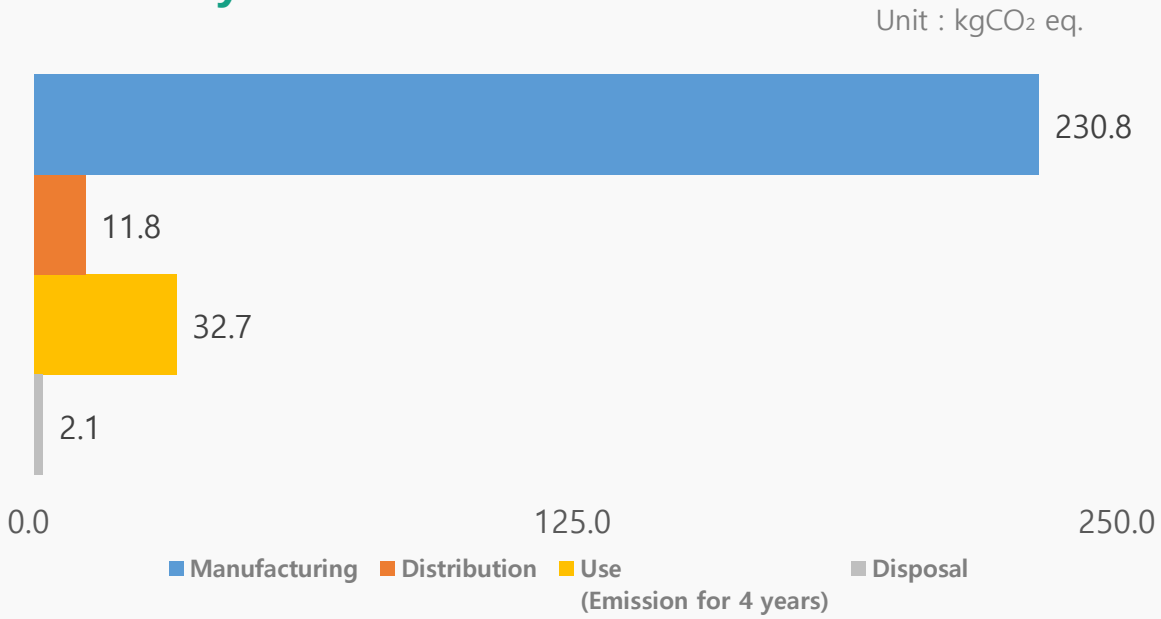
Global Warming Impact Profile



Characterized Environment Impact



Life Cycle Carbon Emissions



* The results differ from to region, But not by much.

Life Cycle Assessment for Galaxy Book3 Ultra 16"

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040 series. Samsung has used SimaPro 9.4.0.3 software and a dedicated LCA S/W database to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 10 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.8
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML-IA baseline V3.06 / the Netherlands, 1997 as provided in the SimaPro 9.4.0.3 LCA tool
LCA software	SimaPro 9.4.0.3

System boundary of LCA

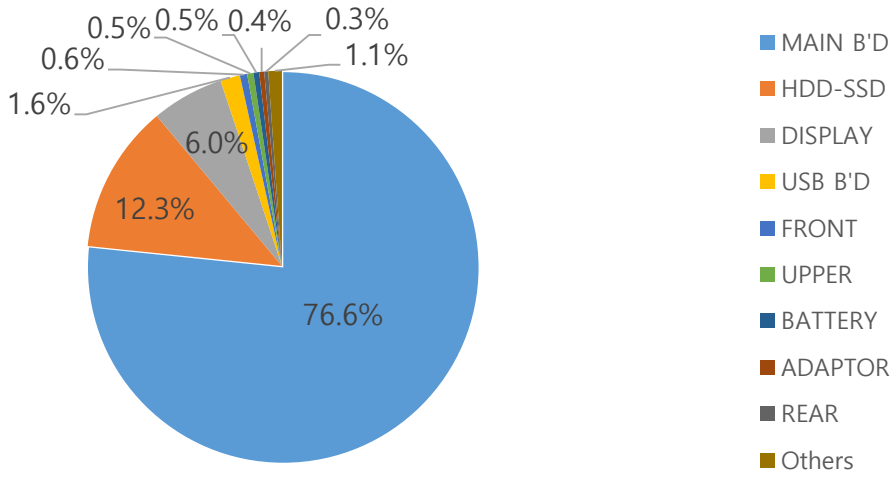
Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics Vietnam
Distribution	From Vietnam to United States
Use	4 years use
Disposal	Waste treatment of parts and material

Critical review for LCA study was done by internal expert in Global CS Center of Samsung Electronics. (ecodesign@samsung.com)

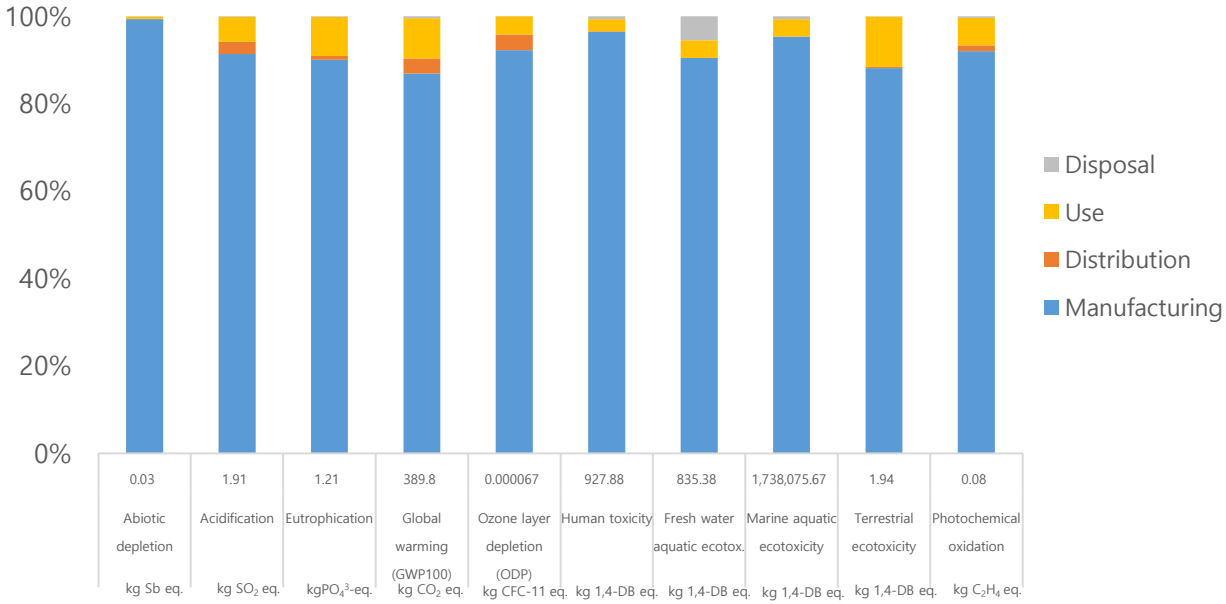
Product Features

Model name	NP960XFH
Dimension	355.4 x 250.4 x 16.5 mm
Display	16“ WQXGA+ AMOLED
Weight	Product & Acc. : 2085.17g Packages : 1231.28g
Energy consumption	15.49 kWh / year

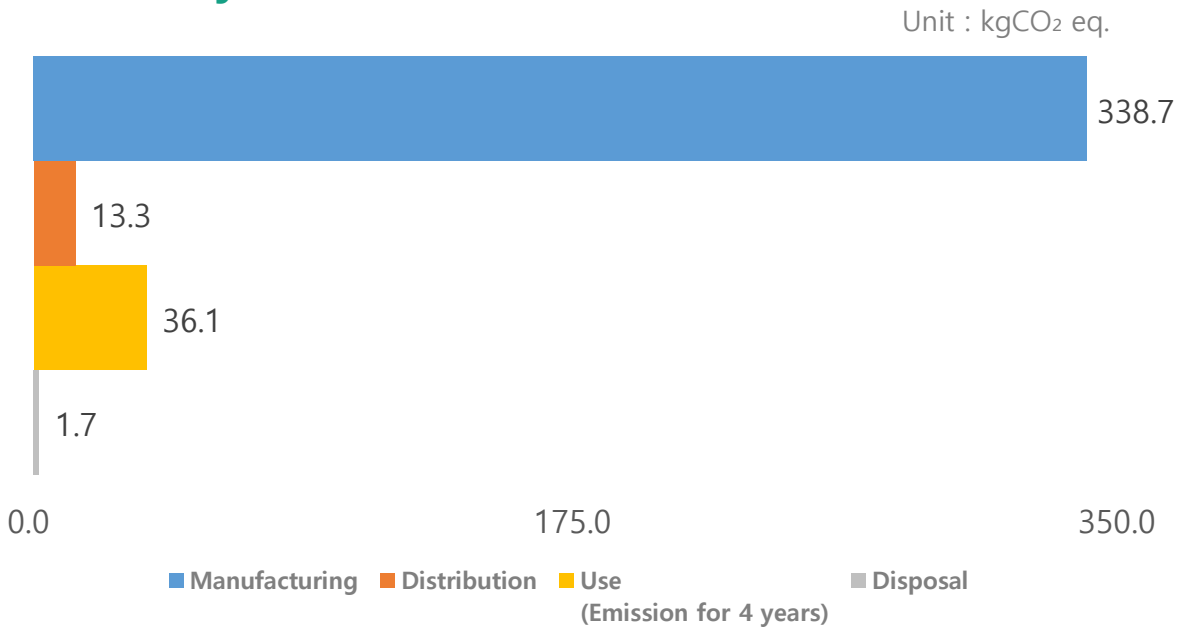
Global Warming Impact Profile



Characterized Environment Impact



Life Cycle Carbon Emissions



* The results differ from to region, But not by much.

Life Cycle Assessment for Galaxy Book3 360 15.6"

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040 series. Samsung has used SimaPro 9.4.0.3 software and a dedicated LCA S/W database to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 10 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.8
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML-IA baseline V3.06 / the Netherlands, 1997 as provided in the SimaPro 9.4.0.3 LCA tool
LCA software	SimaPro 9.4.0.3

System boundary of LCA

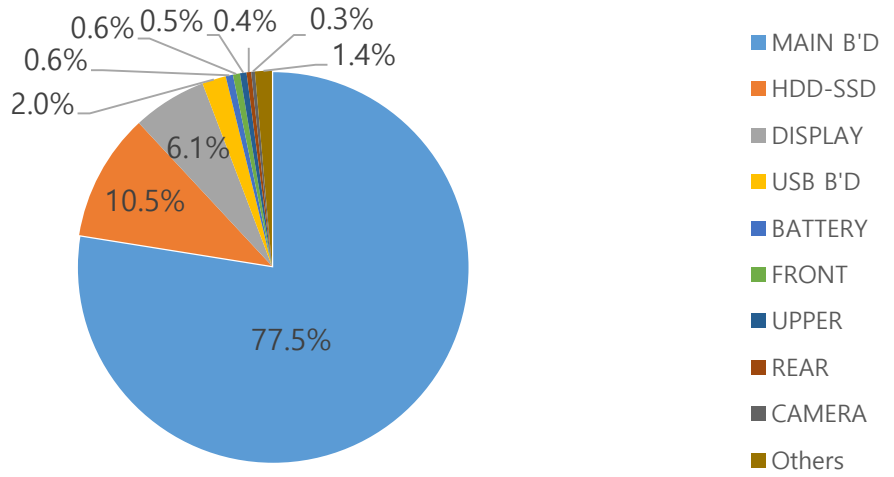
Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics Vietnam
Distribution	From Vietnam to United States
Use	4 years use
Disposal	Waste treatment of parts and material

Critical review for LCA study was done by internal expert in Global CS Center of Samsung Electronics. (ecodesign@samsung.com)

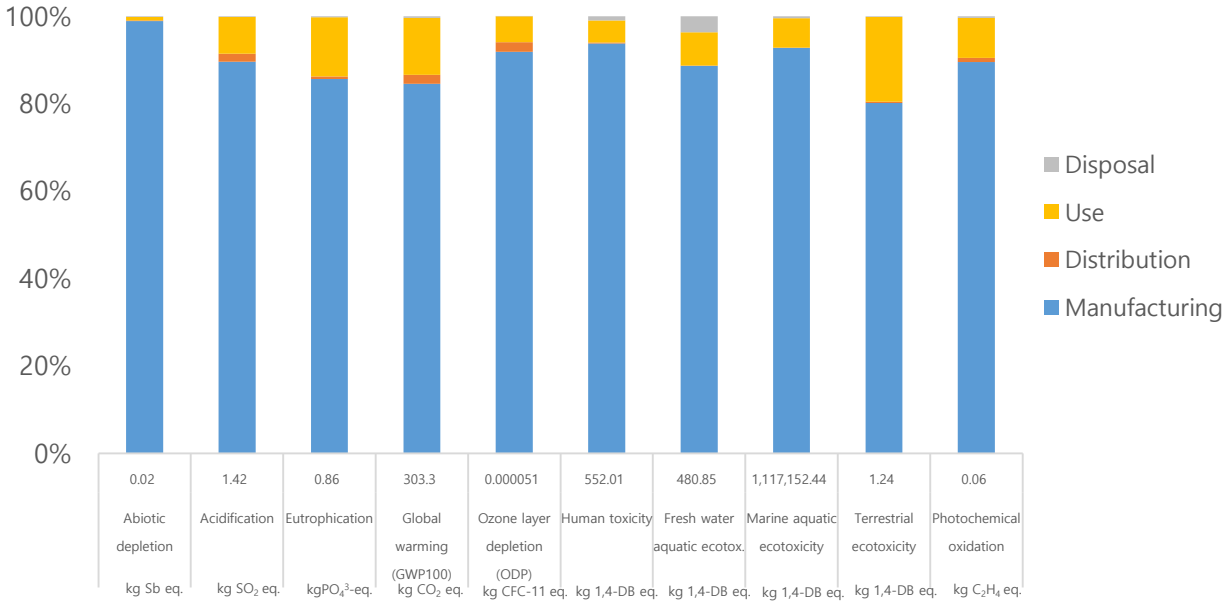
Product Features

Model name	NP750QFG
Dimension	355.4 x 228 x 13.7 mm
Display	15.6“ FHD AMOLED
Weight	Product & Acc. : 1624.17g Packages : 686.35g
Energy consumption	16.85 kWh / year

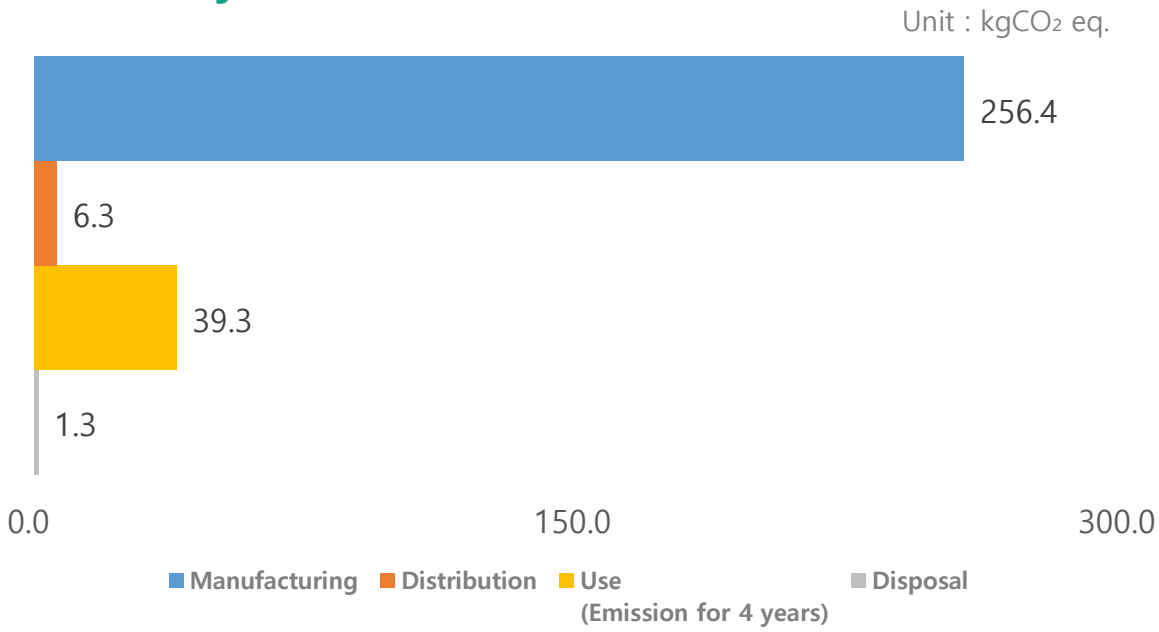
Global Warming Impact Profile



Characterized Environment Impact



Life Cycle Carbon Emissions



* The results differ from to region, But not by much.

Life Cycle Assessment for Galaxy Book3 Pro 360 16"

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040 series. Samsung has used SimaPro 9.4.0.3 software and a dedicated LCA S/W database to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 10 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.8
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML-IA baseline V3.06 / the Netherlands, 1997 as provided in the SimaPro 9.4.0.3 LCA tool
LCA software	SimaPro 9.4.0.3

System boundary of LCA

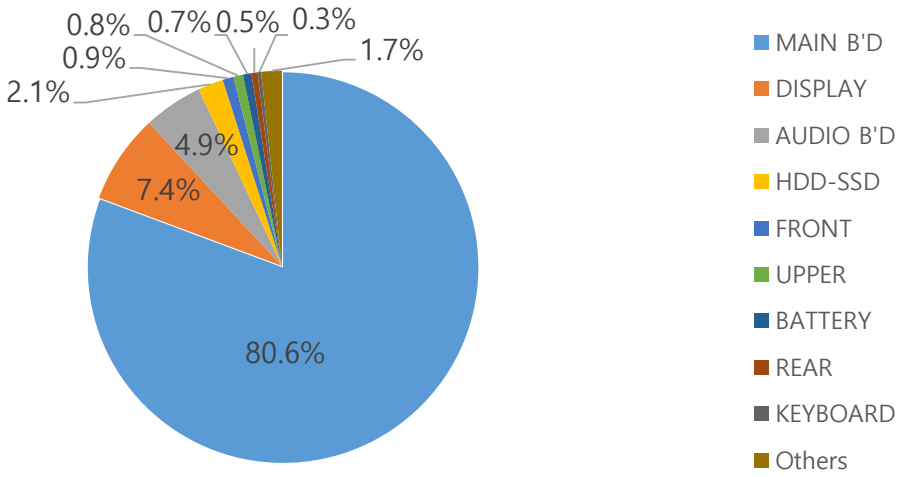
Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics Vietnam
Distribution	From Vietnam to United States
Use	4 years use
Disposal	Waste treatment of parts and material

Critical review for LCA study was done by internal expert in Global CS Center of Samsung Electronics. (ecodesign@samsung.com)

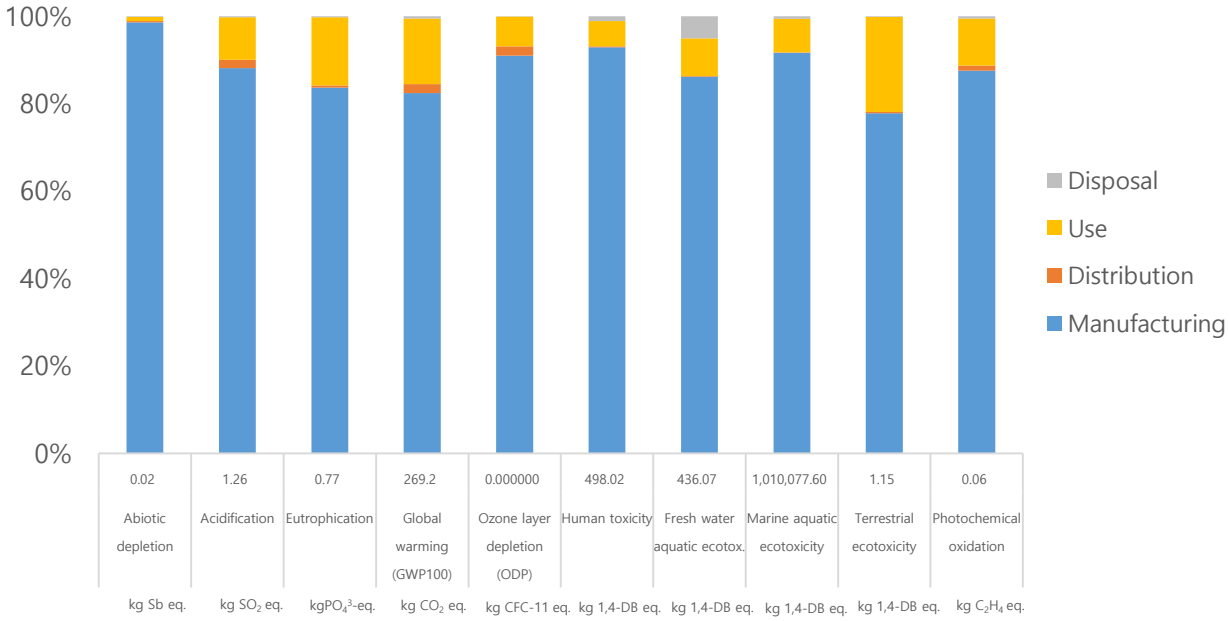
Product Features

Model name	NP960QFG
Dimension	355.4 x 252.2 x 12.8 mm
Display	16.0" WQXGA+ AMOLED
Weight	Product & Acc. : 1,831.34g Packages : 998.24g
Energy consumption	17.36 kWh / year

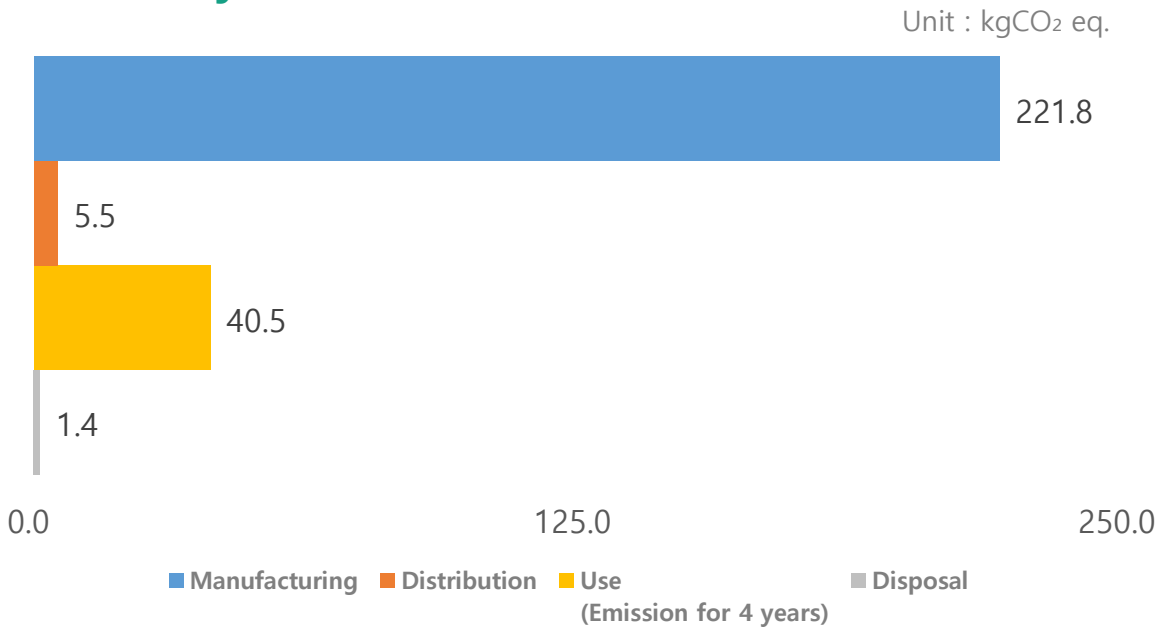
Global Warming Impact Profile



Characterized Environment Impact



Life Cycle Carbon Emissions



* The results differ from to region, But not by much.

Life Cycle Assessment for Galaxy Book3 Pro 16"

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040 series. Samsung has used SimaPro 9.3.0.3 software and a dedicated LCA S/W database to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 10 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.8
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML 2 baseline 2000 V2.05 / the Netherlands, 1997 as provided in the SimaPro 9.3.0.3 LCA tool
LCA software	SimaPro 9.3.0.3

System boundary of LCA

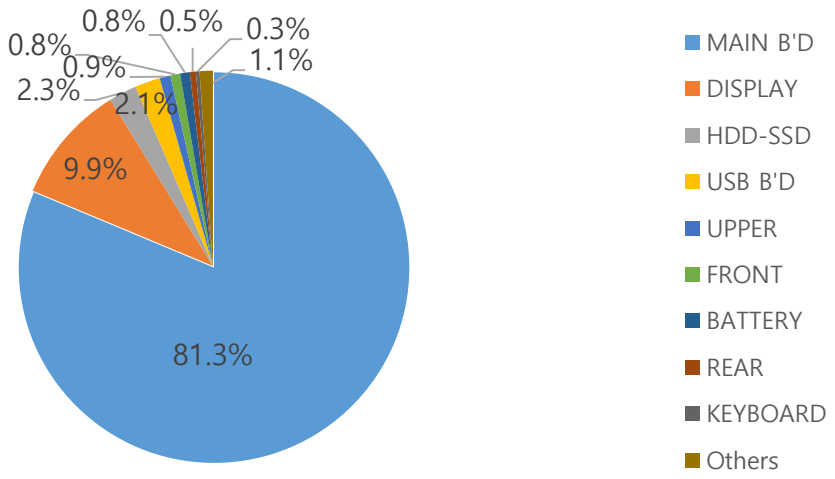
Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics Vietnam
Distribution	From Vietnam to United States
Use	4 years use
Disposal	Waste treatment of parts and material

Critical review for LCA study was done by internal expert in Global CS Center of Samsung Electronics. (ecodesign@samsung.com)

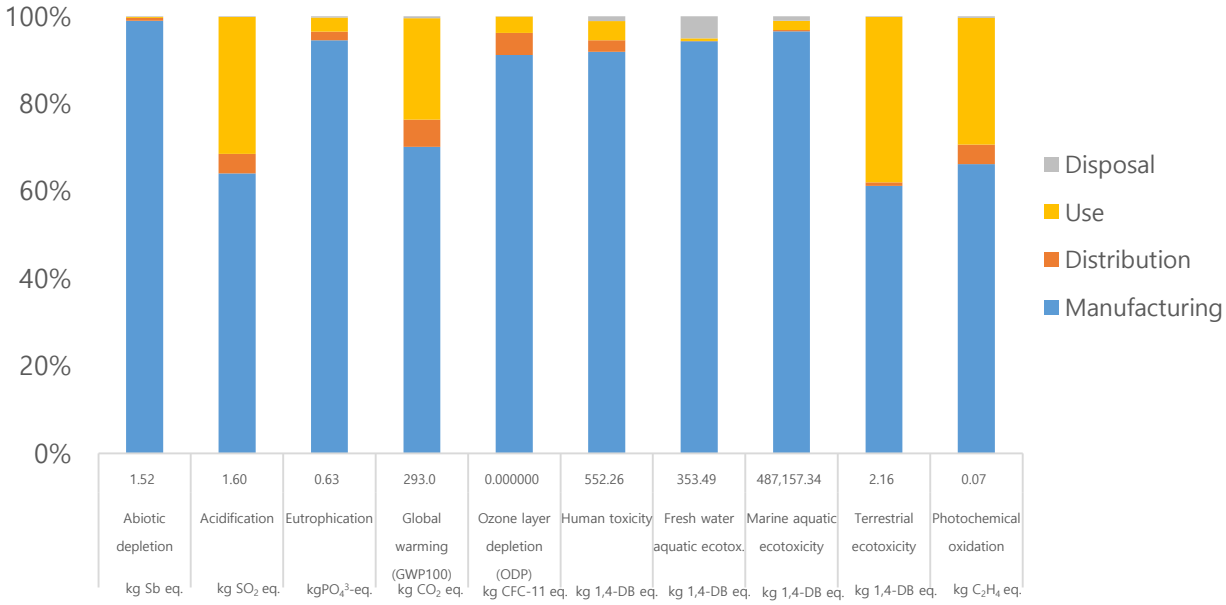
Product Features

Model name	NP960XFG
Dimension	355.4 x 250.4 x 12.5 mm
Display	16.0" WQXGA+ AMOLED
Weight	Product & Acc. : 1724.62g Packages : 990.55g
Energy consumption	20.36 kWh / year

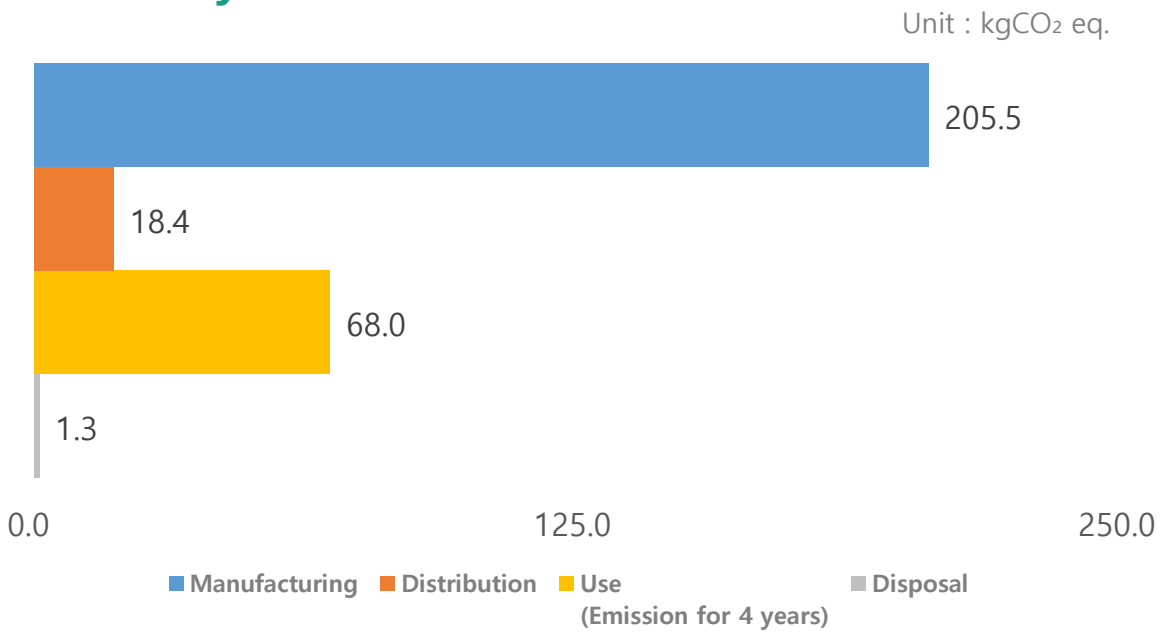
Global Warming Impact Profile



Characterized Environment Impact



Life Cycle Carbon Emissions



* The results differ from to region, But not by much.

Life Cycle Assessment for Galaxy Book3 Pro 14"

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040 series. Samsung has used SimaPro 9.4.0.3 software and a dedicated LCA S/W database to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 10 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.8
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML-IA baseline V3.06 / the Netherlands, 1997 as provided in the SimaPro 9.4.0.3 LCA tool
LCA software	SimaPro 9.4.0.3

System boundary of LCA

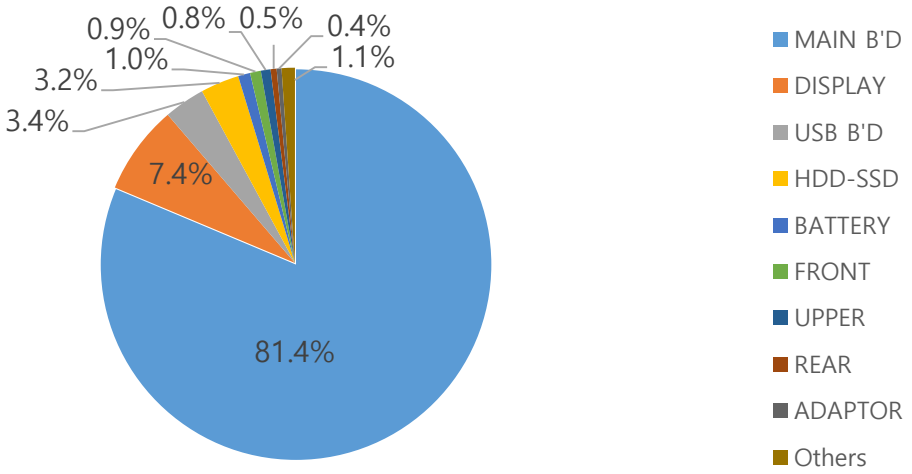
Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics Vietnam
Distribution	From Vietnam to United States
Use	4 years use
Disposal	Waste treatment of parts and material

Critical review for LCA study was done by internal expert in Global CS Center of Samsung Electronics. (ecodesign@samsung.com)

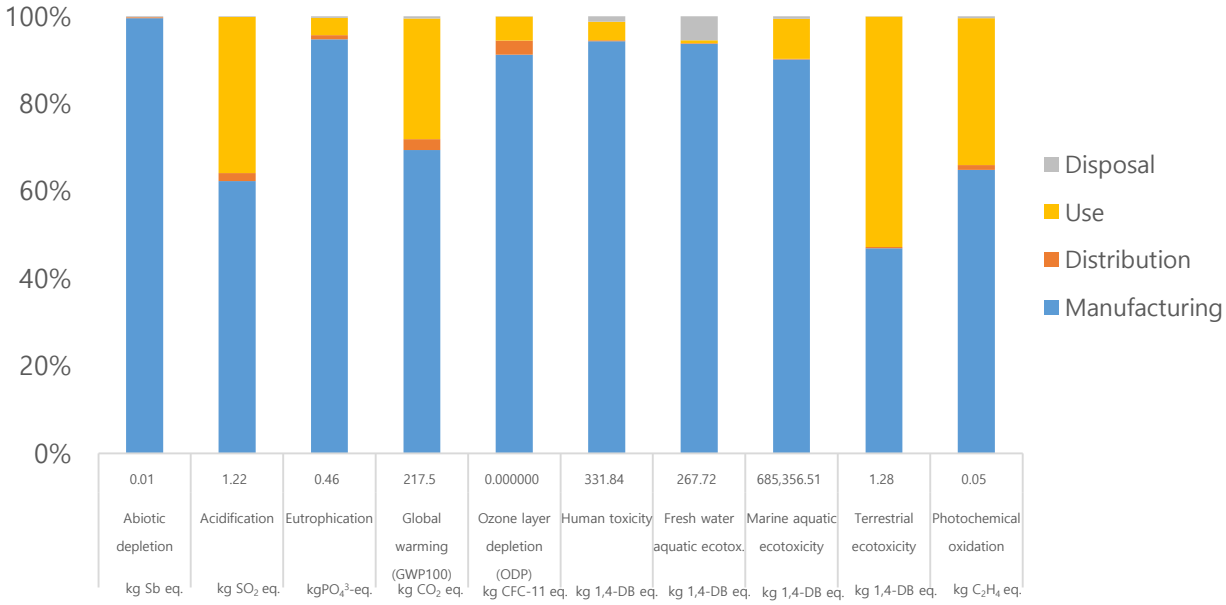
Product Features

Model name	NP940XFG
Dimension	312.3 x 223.8 x 11.3 mm
Display	14.0" WQXGA+ AMOLED
Weight	Product & Acc. : 1333.70g Packages : 771.70g
Energy consumption	17.86 kWh / year

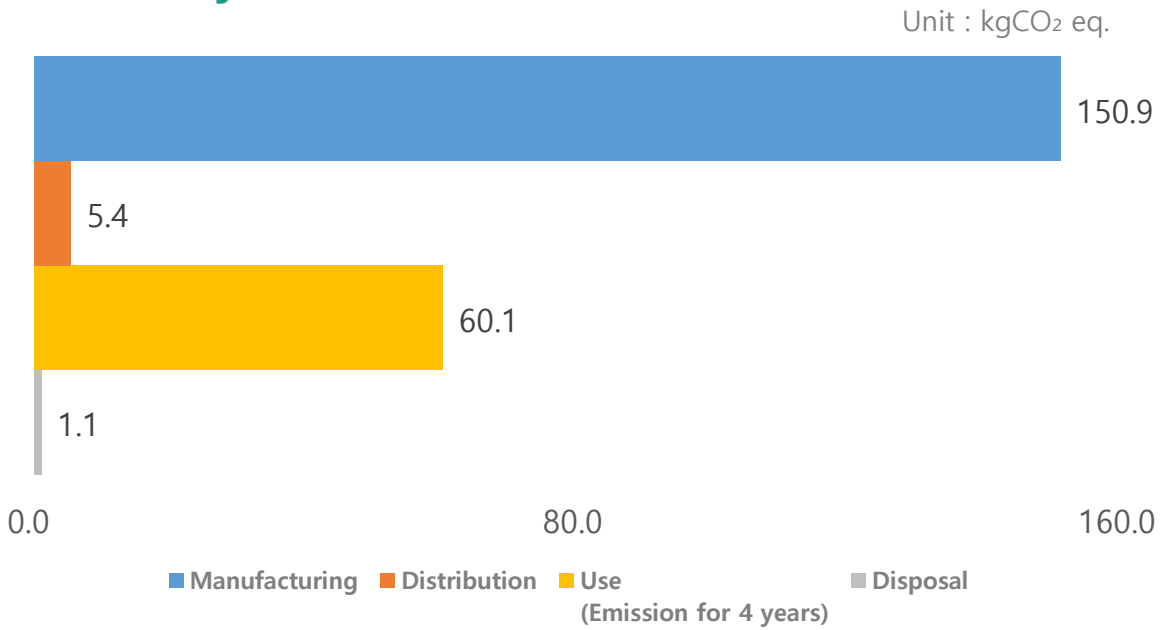
Global Warming Impact Profile



Characterized Environment Impact



Life Cycle Carbon Emissions



* The results differ from to region, But not by much.

Life Cycle Assessment for Kairos-14

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; pre-manufacturing; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040 series. Samsung has used SimaPro 9.3.0.3 software and a dedicated LCA S/W database to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 10 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.8
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML 2 baseline 2000 V2.05 / the Netherlands, 1997 as provided in the SimaPro 9.3.0.3 LCA tool
LCA software	SimaPro 9.3.0.3

System boundary of LCA

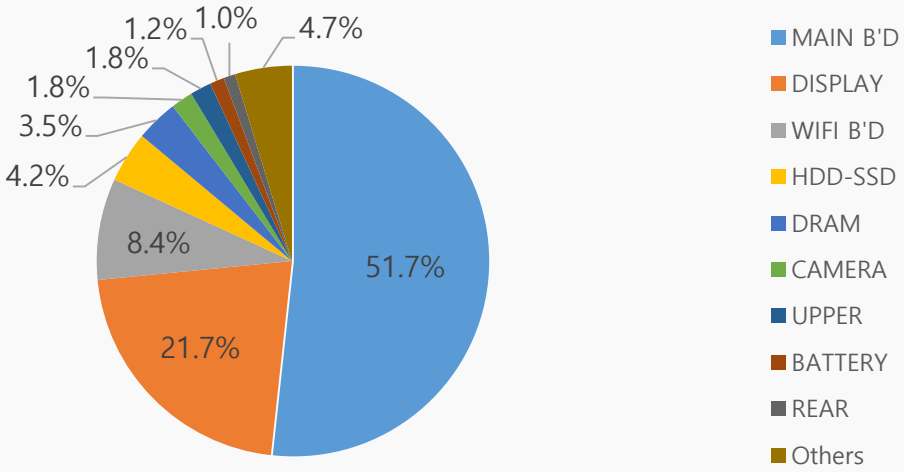
Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics Vietnam
Distribution	From Vietnam to United States
Use	4 years use
Disposal	Waste treatment of parts and material

Critical review for LCA study was done by internal expert in Global CS Center of Samsung Electronics. (ecodesign@samsung.com)

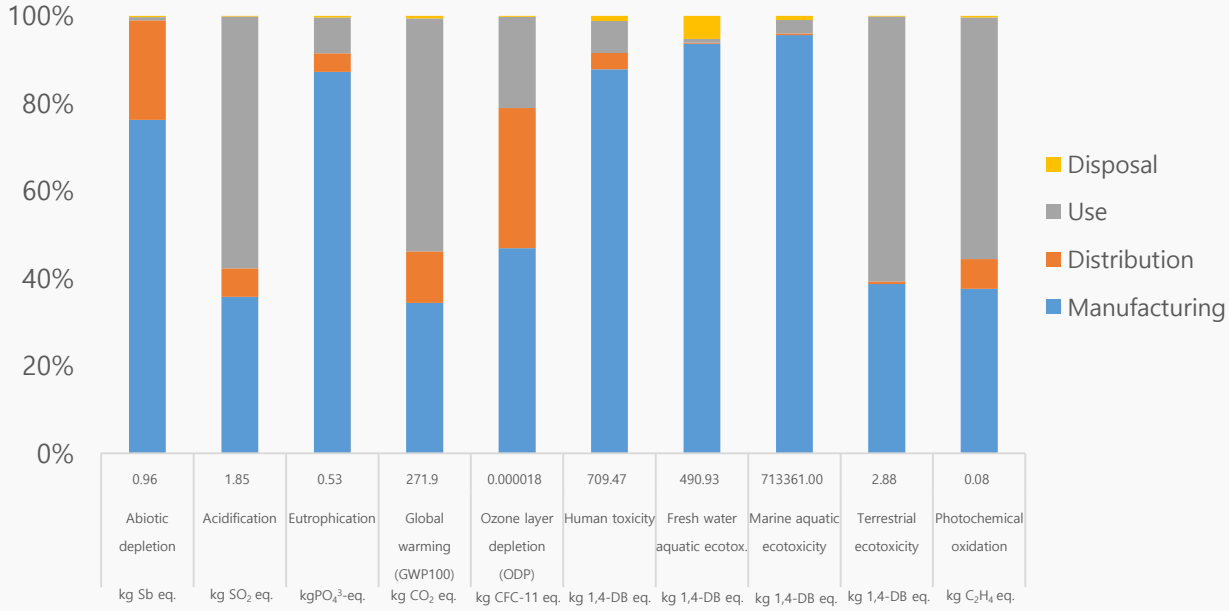
Product Features

Model name	NP646BEF
Dimension	326.4 x 213.8 x 17.9 ~ 19.9 mm
Display	14.0" FHD AMOLED
Weight	Product & Acc. : 1730.49g Packages : 522.51g

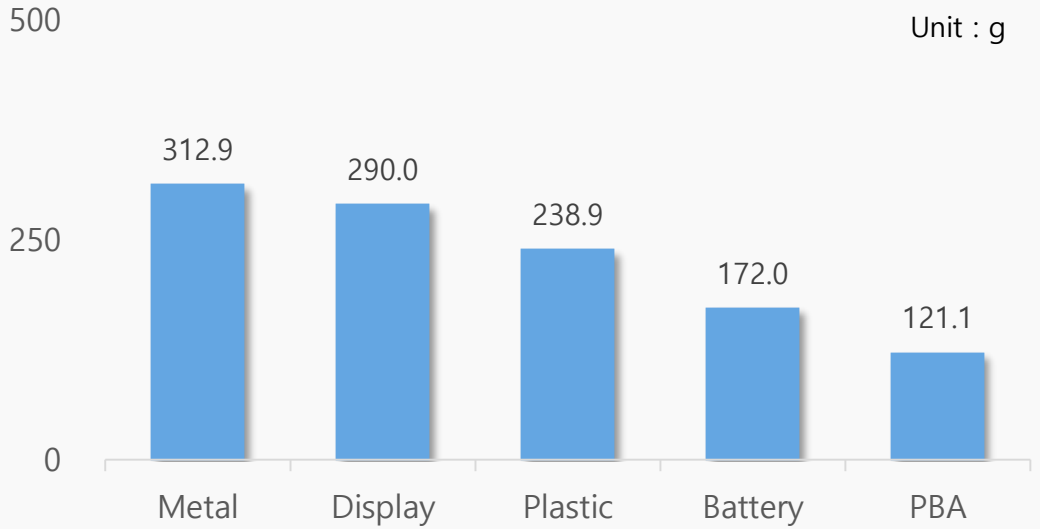
Global Warming Impact Profile



Characterized Environment Impact



Top 5 Substances of Target model



※ Calculated the Top 10 heaviest materials of the target model

Life Cycle Assessment for Metis-12

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; pre-manufacturing; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040 series. Samsung has used SimaPro 9.3.0.3 software and a dedicated LCA S/W database to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 10 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.8
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML 2 baseline 2000 V2.05 / the Netherlands, 1997 as provided in the SimaPro 9.3.0.3 LCA tool
LCA software	SimaPro 9.3.0.3

System boundary of LCA

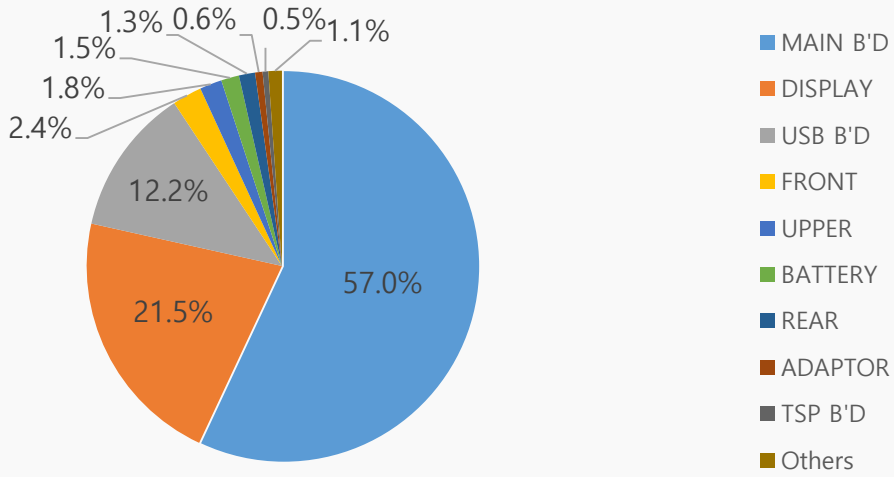
Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics Vietnam
Distribution	From Vietnam to United States
Use	4 years use
Disposal	Waste treatment of parts and material

Critical review for LCA study was done by internal expert in Global CS Center of Samsung Electronics. (ecodesign@samsung.com)

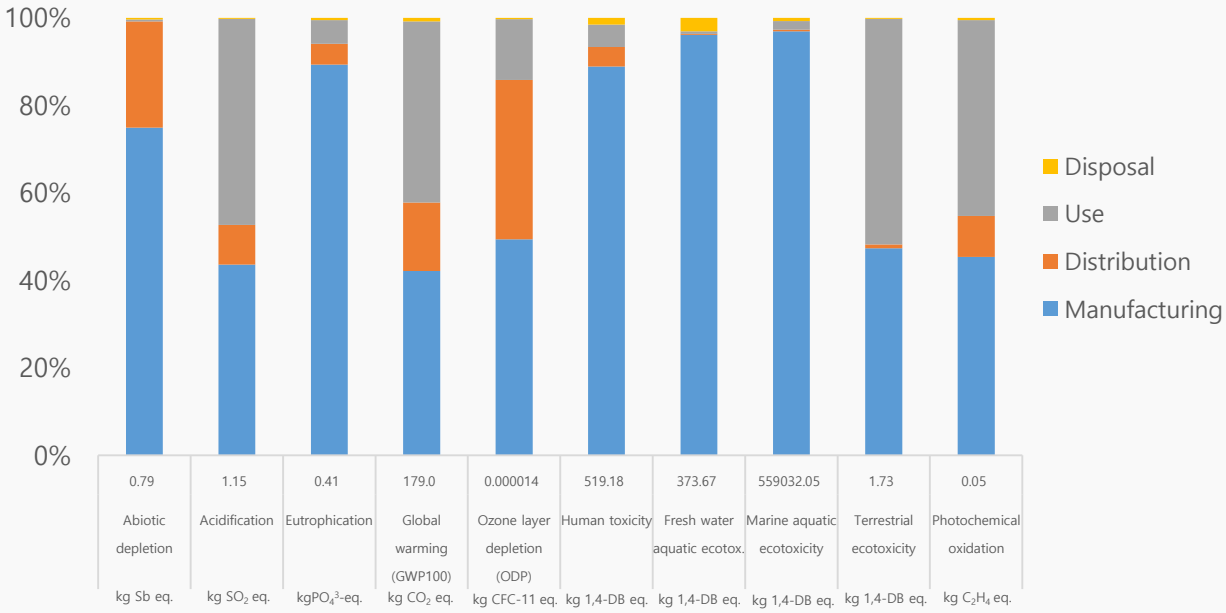
Product Features

Model name	XE520QEA
Dimension	287.9 x 206.6 x 16.9
Display	12.4" WQXGA LED
Weight	Product & Acc. : 1451.55g Packages : 521.32g

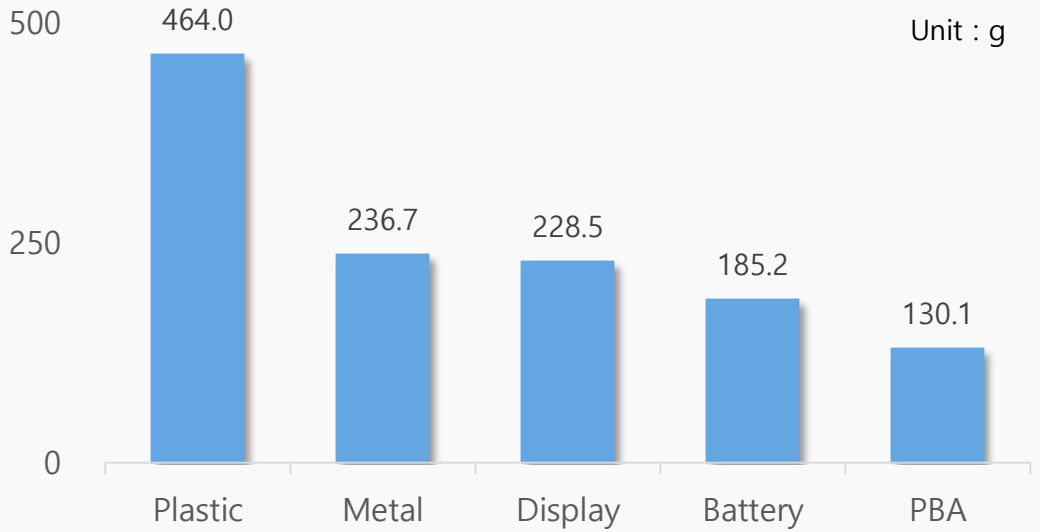
Global Warming Impact Profile



Characterized Environment Impact



Top 5 Substances of Target model



※ Calculated the Top 10 heaviest materials of the target model

Life Cycle Assessment for Mars2-13

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; pre-manufacturing; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040 series. Samsung has used SimaPro 9.3.0.3 software and a dedicated LCA S/W database to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 10 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.8
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML 2 baseline 2000 V2.05 / the Netherlands, 1997 as provided in the SimaPro 9.3.0.3 LCA tool
LCA software	SimaPro 9.3.0.3

System boundary of LCA

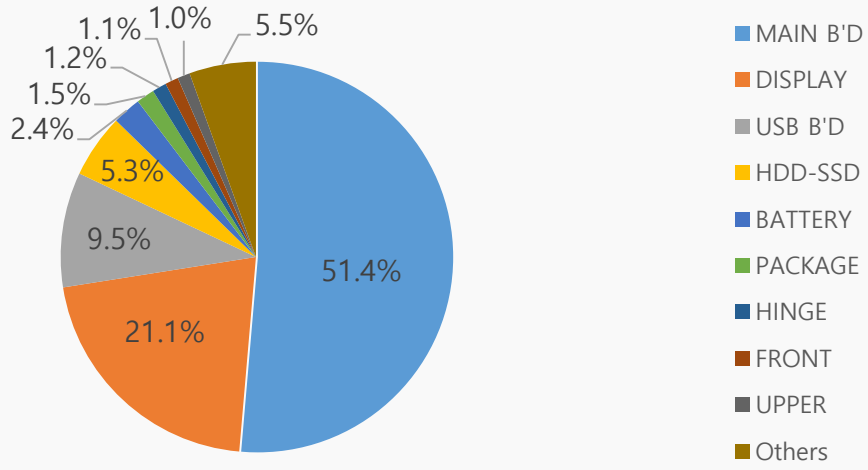
Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics Vietnam
Distribution	From Vietnam to United States
Use	4 years use
Disposal	Waste treatment of parts and material

Critical review for LCA study was done by internal expert in Global CS Center of Samsung Electronics. (ecodesign@samsung.com)

Product Features

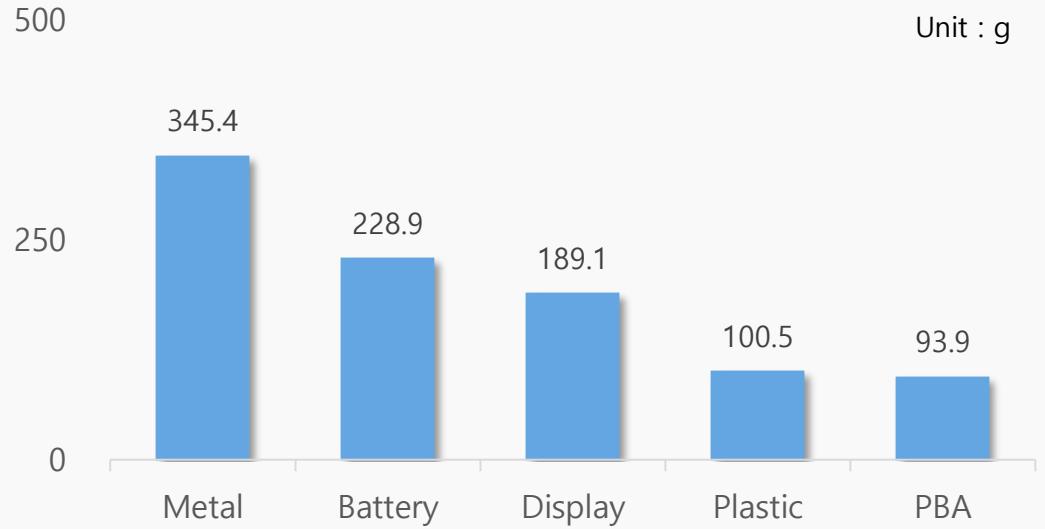
Model name	NP930QED
Dimension	302.5 x 202.0 x 11.5 mm
Display	13.3" FHD AMOLED
Weight	Product & Acc. : 1257.93g Packages : 772.03g

Global Warming Impact Profile



Characterized Environment Impact

Top 5 Substances of Target model



※ Calculated the Top 10 heaviest materials of the target model

Life Cycle Assessment for Mars2-15

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; pre-manufacturing; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040 series. Samsung has used SimaPro 9.3.0.3 software and a dedicated LCA S/W database to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 10 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.8
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML 2 baseline 2000 V2.05 / the Netherlands, 1997 as provided in the SimaPro 9.3.0.3 LCA tool
LCA software	SimaPro 9.3.0.3

System boundary of LCA

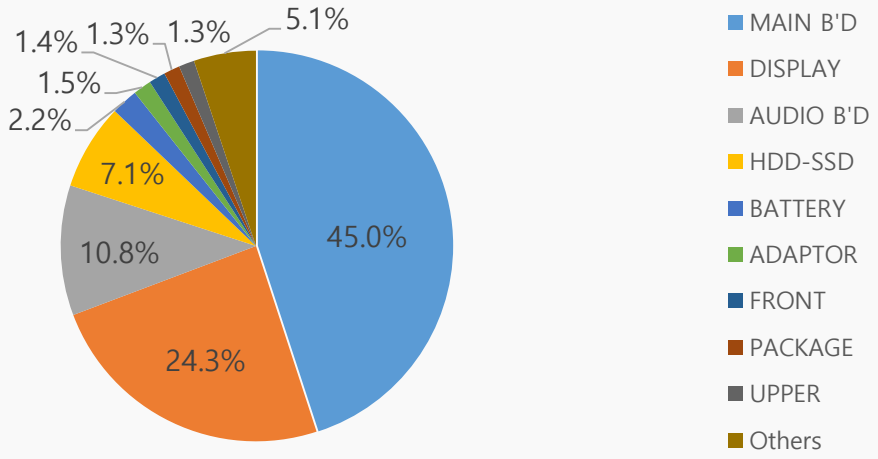
Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics Vietnam
Distribution	From Vietnam to United States
Use	4 years use
Disposal	Waste treatment of parts and material

Critical review for LCA study was done by internal expert in Global CS Center of Samsung Electronics. (ecodesign@samsung.com)

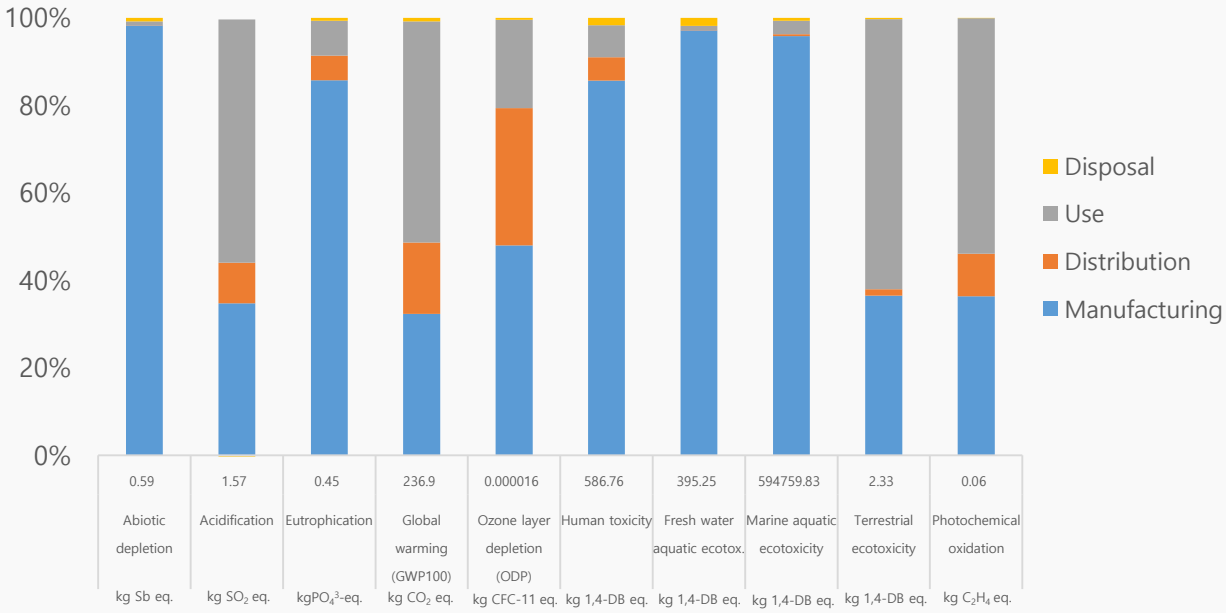
Product Features

Model name	NT950QED
Dimension	354.85 x 227.97 x 11.9 mm
Display	15.6" FHD AMOLED
Weight	Product & Acc. : 1727.48g Packages : 835.11g

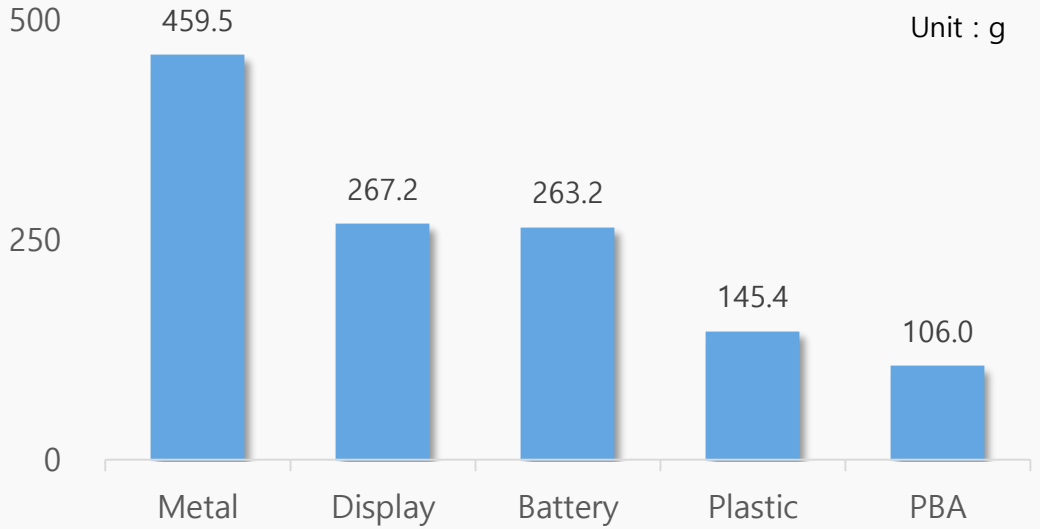
Global Warming Impact Profile



Characterized Environment Impact



Top 5 Substances of Target model



※ Calculated the Top 10 heaviest materials of the target model

Life Cycle Assessment for Vesta-13

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; pre-manufacturing; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040 series. Samsung has used SimaPro 9.3.0.3 software and a dedicated LCA S/W database to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 10 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.8
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML 2 baseline 2000 V2.05 / the Netherlands, 1997 as provided in the SimaPro 9.3.0.3 LCA tool
LCA software	SimaPro 9.3.0.3

System boundary of LCA

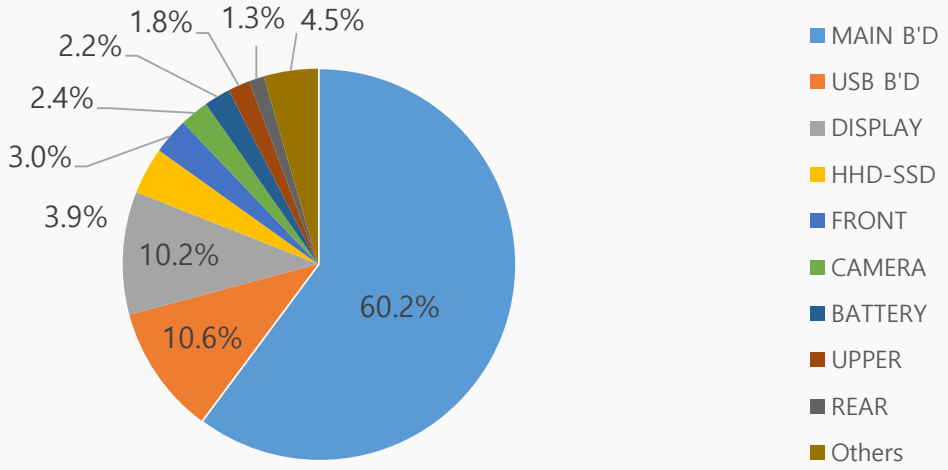
Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics Vietnam
Distribution	From Vietnam to United States
Use	4 years use
Disposal	Waste treatment of parts and material

Critical review for LCA study was done by internal expert in Global CS Center of Samsung Electronics. (ecodesign@samsung.com)

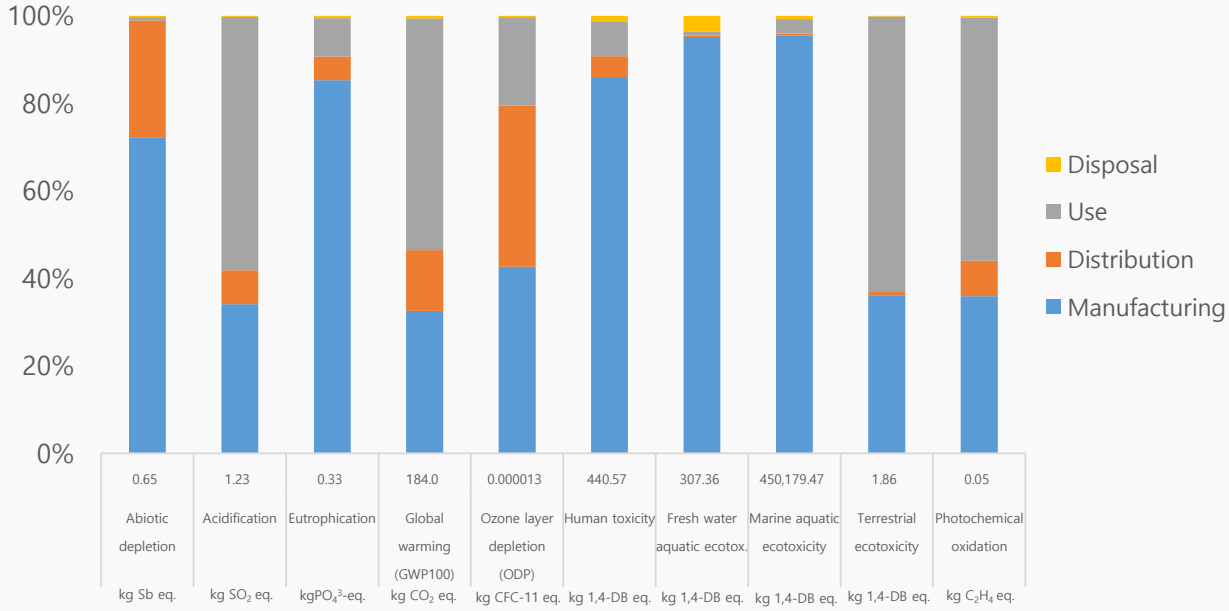
Product Features

Model name	NP730QED
Dimension	304.4 x 202.0 x 12.9
Display	13.3" FHD AMOLED
Weight	Product & Acc. : 1369.79g Packages : 431.70g

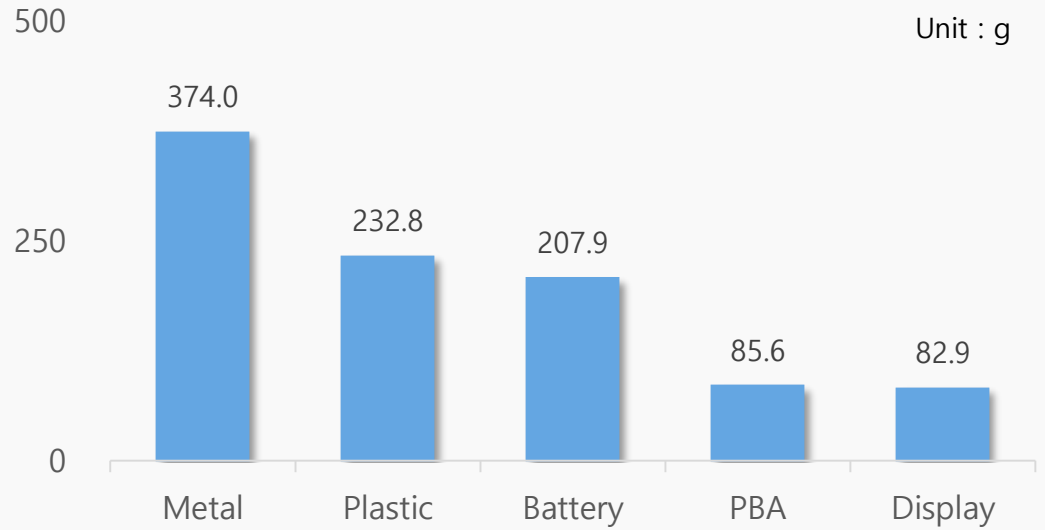
Global Warming Impact Profile



Characterized Environment Impact



Top 5 Substances of Target model



※ Calculated the Top 10 heaviest materials of the target model

Life Cycle Assessment for Venus2-13

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; pre-manufacturing; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040 series. Samsung has used SimaPro 9.3.0.3 software and a dedicated LCA S/W database to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 10 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.8
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML 2 baseline 2000 V2.05 / the Netherlands, 1997 as provided in the SimaPro 9.3.0.3 LCA tool
LCA software	SimaPro 9.3.0.3

System boundary of LCA

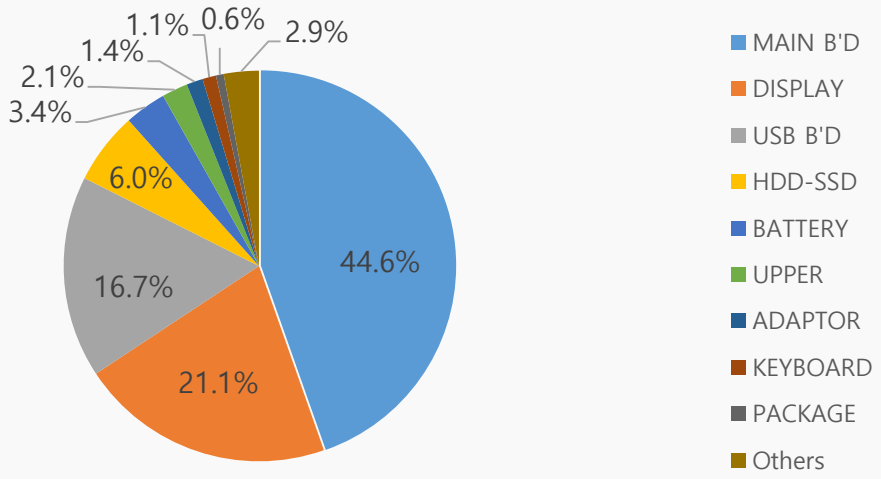
Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics Vietnam
Distribution	From Vietnam to United States
Use	4 years use
Disposal	Waste treatment of parts and material

Critical review for LCA study was done by internal expert in Global CS Center of Samsung Electronics. (ecodesign@samsung.com)

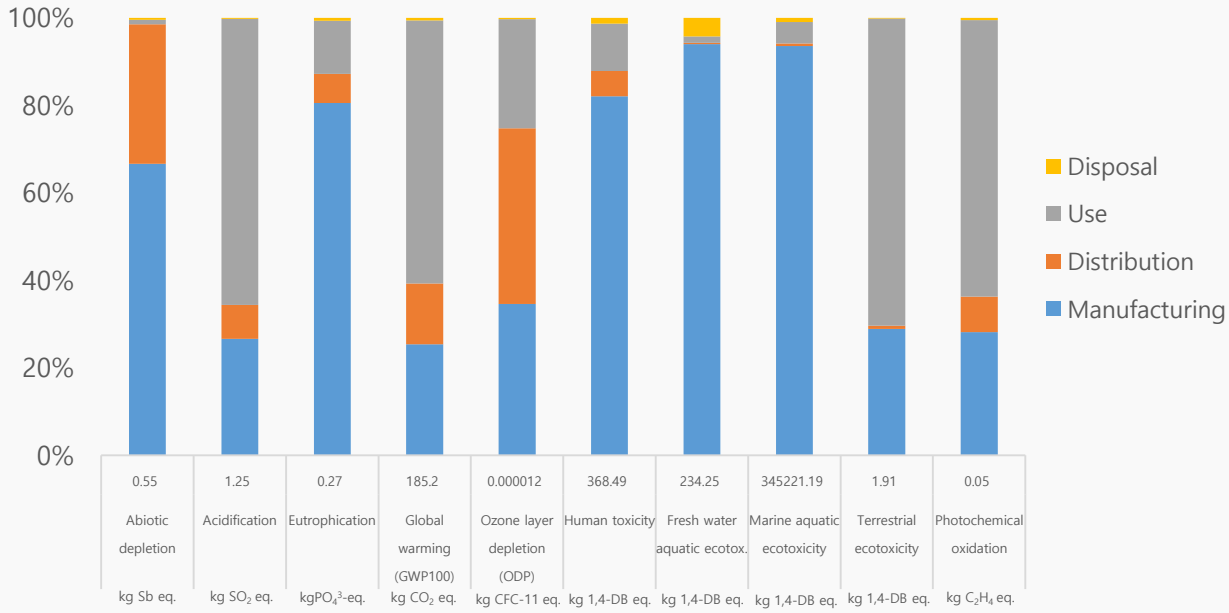
Product Features

Model name	NP930XED
Dimension	304.4 x 199.8 x 11.2 mm
Display	13.3" FHD AMOLED
Weight	Product & Acc. : 1068.62g Packages : 749.21g

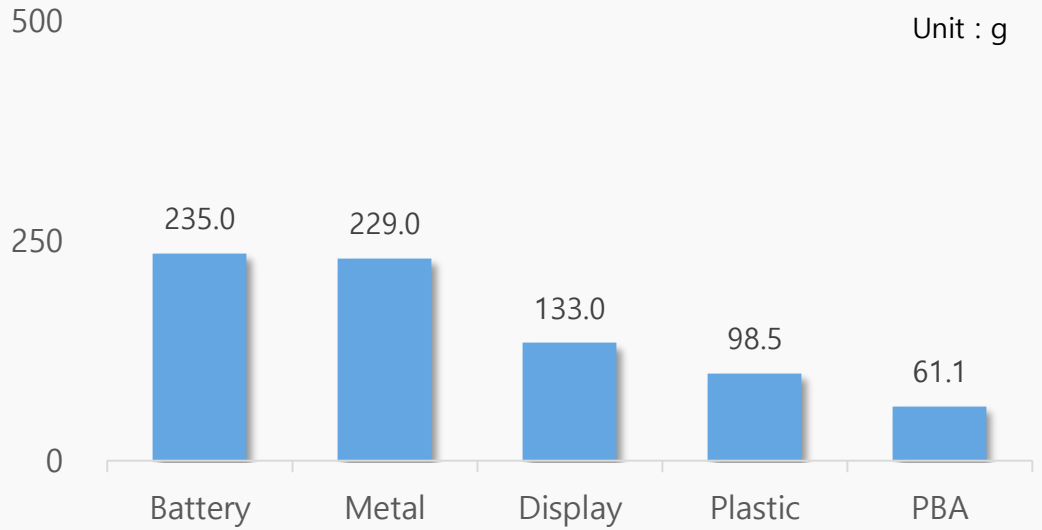
Global Warming Impact Profile



Characterized Environment Impact



Top 5 Substances of Target model



※ Calculated the Top 10 heaviest materials of the target model

Life Cycle Assessment for Venus2-15

Background

Samsung has developed strong technical experience in assessing the life cycle environmental impacts of its products. The assessment considers potential environmental impacts across the whole life cycle including; pre-manufacturing; product manufacturing; distribution; product use; and disposal phase. To ensure technical quality; the analysis methodology has been completed according to international standard ISO 14040 series. Samsung has used SimaPro 9.3.0.3 software and a dedicated LCA S/W database to measure environmental impacts using a wide range of data categories including; Product bill of material(BOM), parts and components logistics, energy consumption in product use and end-of-life scenario data in order to attain the highest level of accuracy. The outcome of the LCA confirmed and quantified 10 potential environment impact categories including; global warming; abiotic depletion; ocean acidification; eutrophication; and ozone layer depletion; where each impact category has been assessed for each life cycle stage. These LCA results will continue to be considered during product development phase as we aspire to improve the environmental specifications of our products.

Calculation basis

Standard	ISO 14040:2006 and 14044:2006
Database	Ecoinvent 3.8
Method for impact assessment	Life cycle impact assessment classification and characterization factors according to CML 2 baseline 2000 V2.05 / the Netherlands, 1997 as provided in the SimaPro 9.3.0.3 LCA tool
LCA software	SimaPro 9.3.0.3

System boundary of LCA

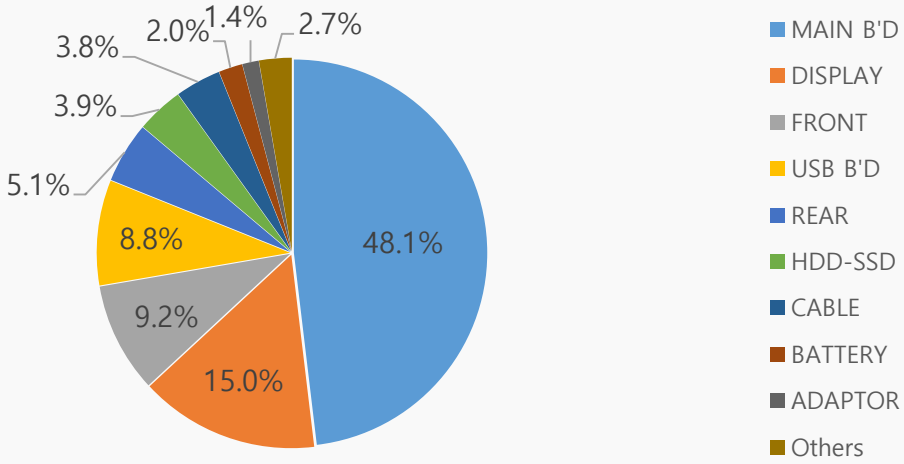
Pre-manufacturing	Parts and materials constituting the products and its transportation
Manufacturing	Product assembly by Samsung Electronics Vietnam
Distribution	From Vietnam to United States
Use	4 years use
Disposal	Waste treatment of parts and material

Critical review for LCA study was done by internal expert in Global CS Center of Samsung Electronics. (ecodesign@samsung.com)

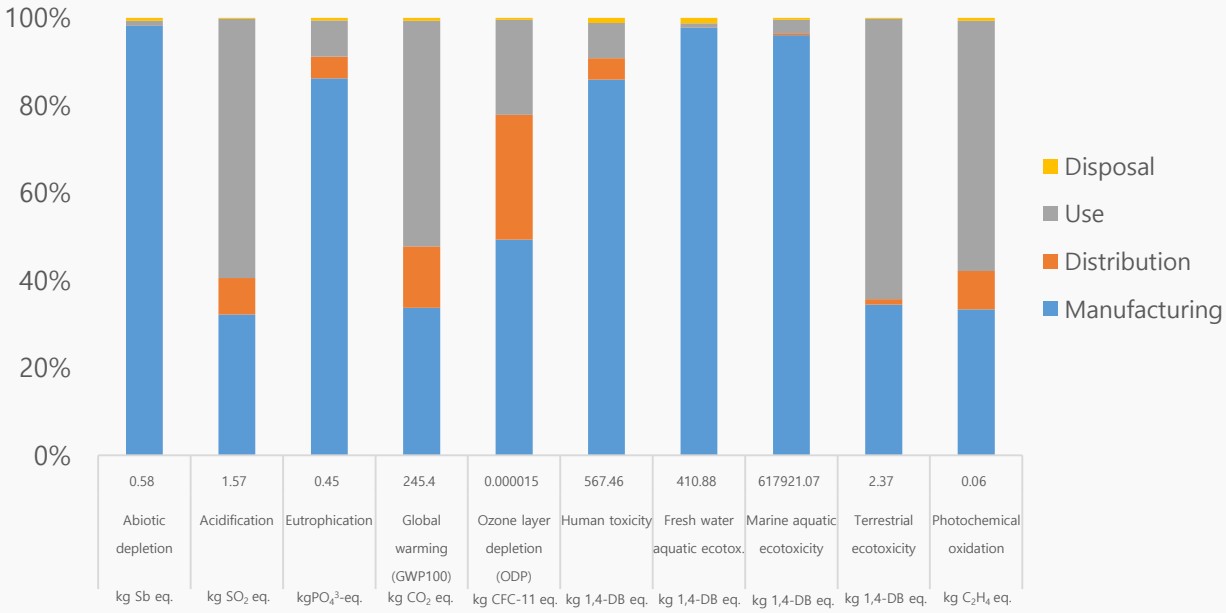
Product Features

Model name	NP950XED
Dimension	355.4 x 225.8 x 11.7 mm
Display	15.6" FHD AMOLED
Weight	Product & Acc. : 1340.48g Packages : 950.04g

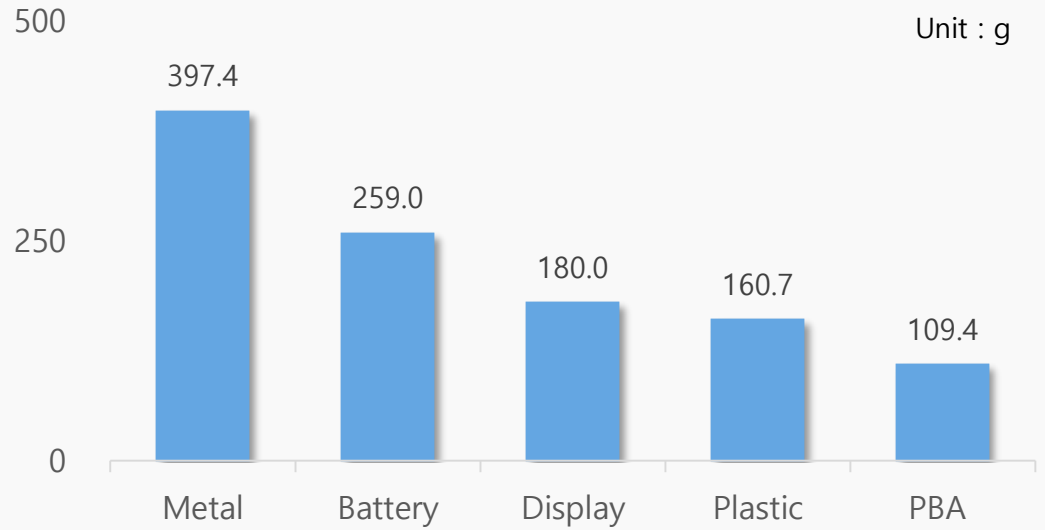
Global Warming Impact Profile



Characterized Environment Impact



Top 5 Substances of Target model



※ Calculated the Top 10 heaviest materials of the target model