

Automated LCA for Complex Products (e.g. Consumer Electronics, Vehicle)

LCM2021 – Andreas Schiffleitner



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Overview

1 | About iPoint

2 | Challenges & Approach

3 | Live Demo

1. About iPoint

We are iPoint

iPoint Facts & Figures



2001

Over 20 years of experience and know-how in the areas of compliance and sustainability



14

Locations worldwide



170+

Employees and growing



250

Global enterprises among customers



70,000

Users from 100+ countries

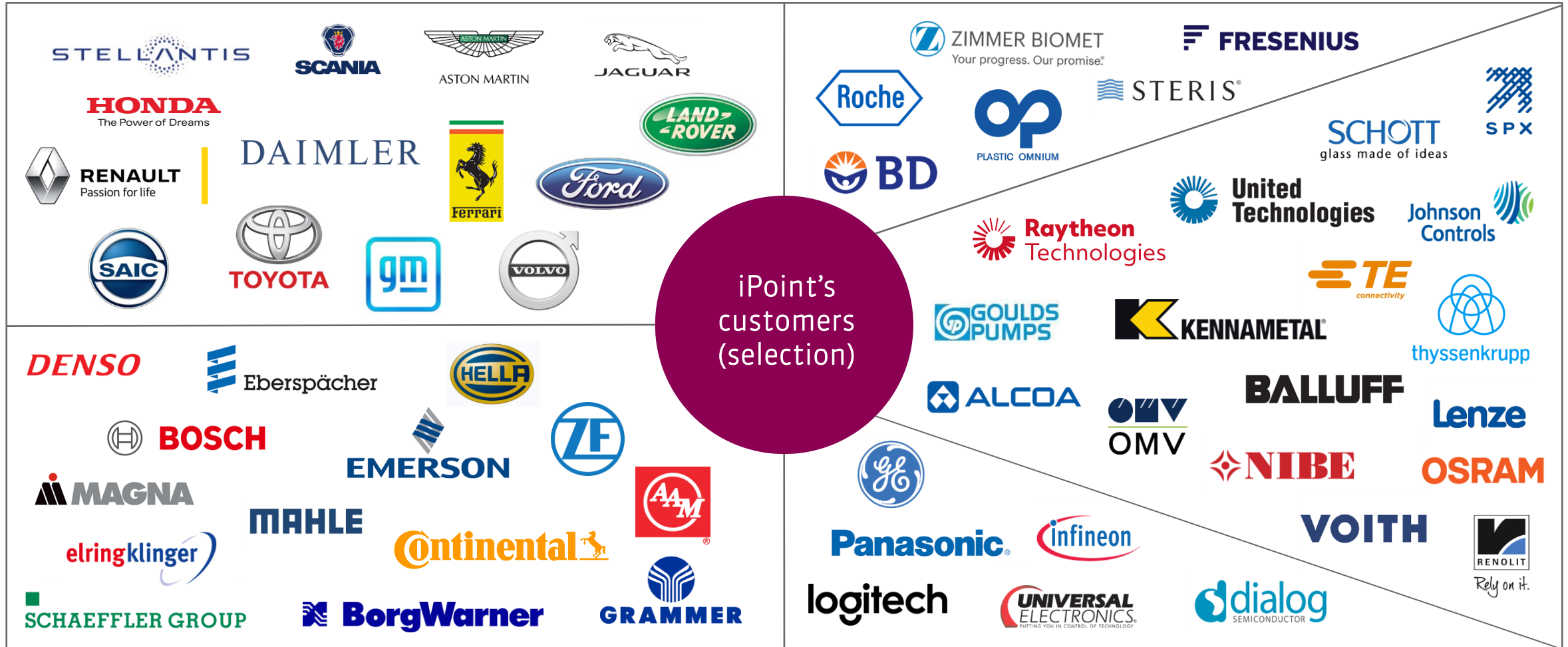


36

2 ISO certifications: 9001, 27001
+ 34 awards

We develop software for...

Compliance, Sustainability, and Risk Management

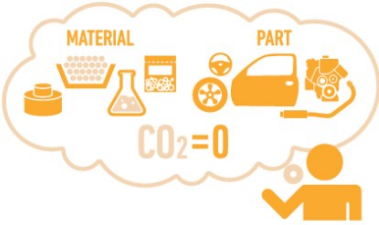


Product Regulations + Voluntary Initiatives



2050 Global challenge

Our goal is to eliminate CO2 emissions from the entire vehicle life cycle by 2050.



News
European Parliament

Parliament backs new CO2 emissions limits for cars and vans

Press Releases [PLENARY SESSION](#) [ENVI](#) 27-03-2019 - 17:40

- A 37.5% CO2 reduction target for new cars and 31% for new vans by 2030
- Measures to address the social impact of low-carbon transition
- Working towards a full life-cycle emissions assessment



<http://www.europarl.europa.eu/news/en/press-room/20200321IPR32112/parliament-backs-new-co2-emissions-limits-for-cars-and-vans>

Road transport is responsible for around 20 % of the EU's total GHG emissions © AP Images/European Union-EP

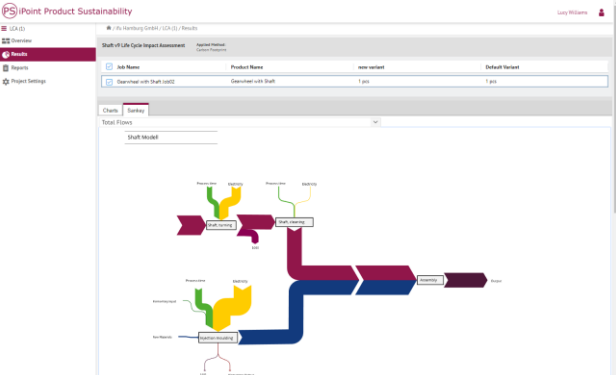
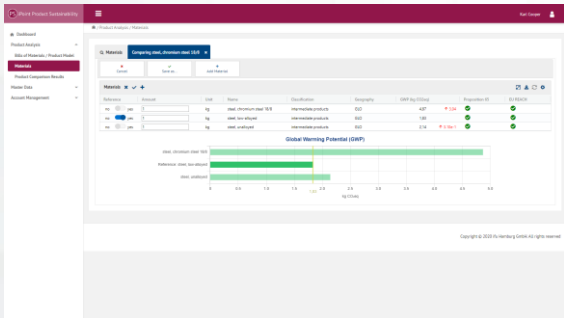
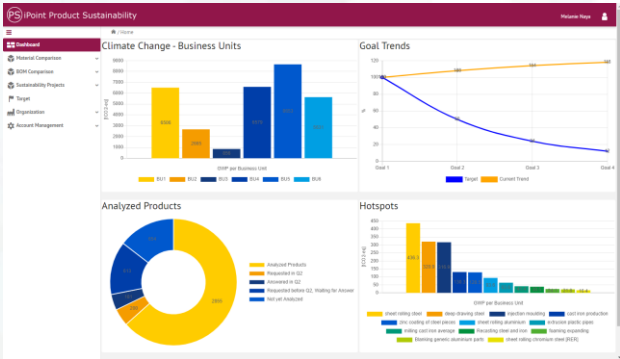
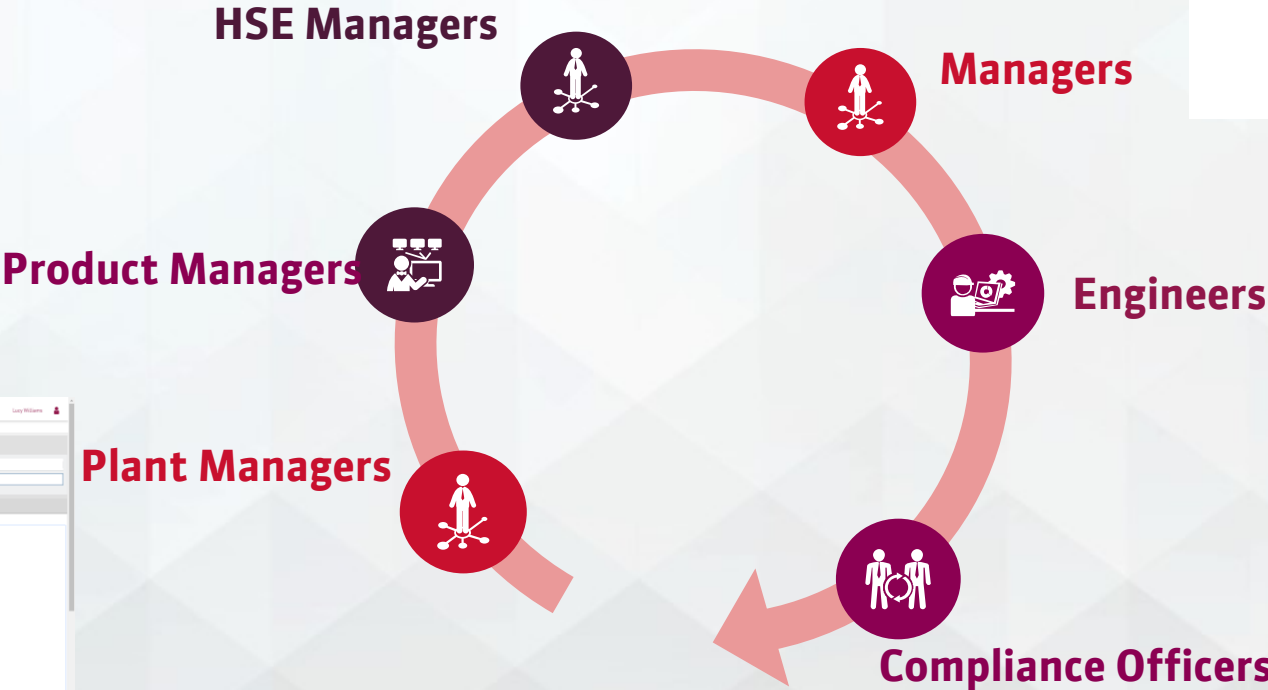


Logitech Slide

Not intended for publication

Integration

Managing sustainably to meet future challenges

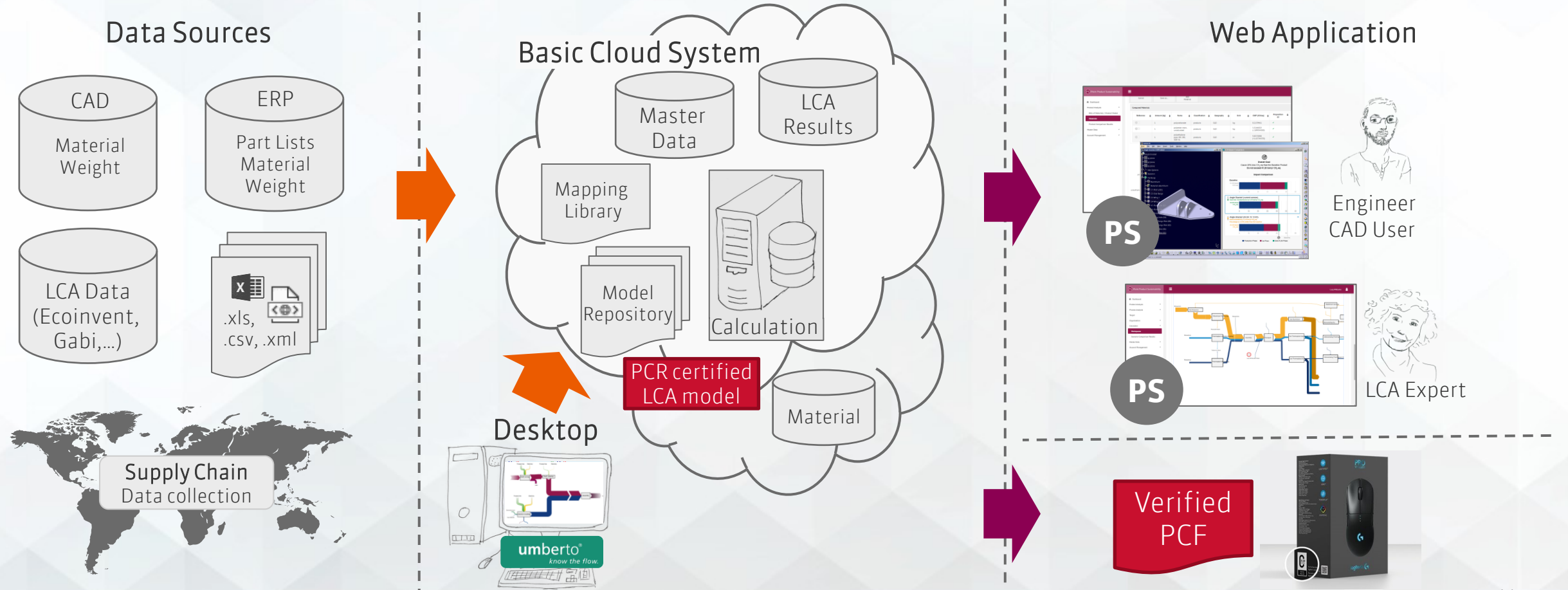


Automation

Knowing the impact of products facilitates business opportunities



Workflow

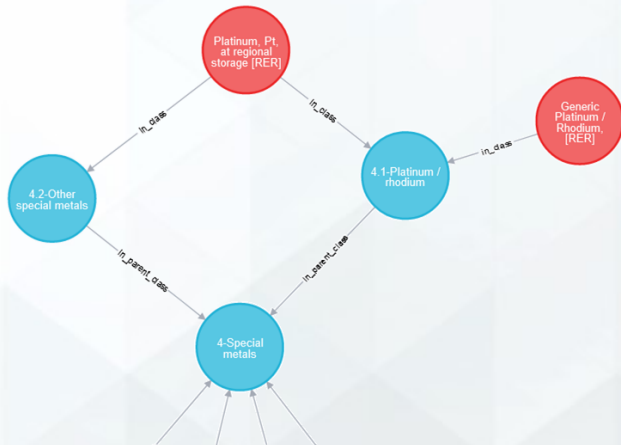


BOM – LCA Data Mapping Workflow

Edit Bill of Materials

Name	Process	Quantity	Unit	Scrap Perce...	Avoidable S...
IM (20y usage)	Use Thermoplast Injection Moulding	2,30	kg	0 %	
Injection Moulding Side Mirror Cover	Assembly	2,30	kg	0 %	
steel, chromium					
Injection Moulding Cover	Thermo				
ABS					

1. Load/Create/Edit a BOM



2. Mapping Library

Variant Mapping

Material name	Mat. unit	Mapped process name	Location	Mapped material	Coefficient	Mapped u...
ABS	kg	market for acrylonitrile-butadien...	GLO	acrylonitrile-butadiene-styrene c...	1	kg
electricity	kWh	market group for electricity, low ...	GLO	electricity, low voltage	1	kWh
steel, chromium	kg	market for steel, chromium steel ...	GLO	steel, chromium steel 18/8	1	kg
acryl varnish	kg	market for acrylic varnish, witho...	RER	acrylic varnish, without water, in ...	1	kg
scrap steel	kg	market for waste reinforcement ...	RoW	waste reinforcement steel	1	kg
alu waste	kg	market for waste				
waste plastic mixture	kg	treatment of was				

3. Mapping of LCA datasets

Train the mapping library

- Machine learning system
- Import of BOM information
- Selection/confirmation of LCA datasets to be mapped

1 Bill of Materials (BOM) Upload 2 Relevant Columns 3 Auto LCA

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Predict classifications and datasets:

CLASS_HINT (c) PERCENTAGE (p) TOLERANCE (t) UNIT (u)

PA66 CLASS_HINT 5.1.b-unfilled CLASS_HINT

Classification:

5.1.a-filled	0.30
5.1-Thermoplastics	0.30
B:Mining and quarrying	0.19
PA - Polyamide, unfilled, group	0.05
PC - Polycarbonate, unfilled, group	0.05

Q Enable Manual Search

Dataset:

Search for a dataset

market for nylon 6-6	1.00
market for nylon 6	1.00

Live Demo

Thank you!



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