

How Life Cycle Information will be used in a Digital Circular Economy?



Martina Prox, ifu Hamburg GmbH – member of the iPoint Group





- Challenges and Hurdles for a Circular Economy
- What is the Digital Circular Economy?
- How will Life Cycle Information be used?
- Outlook

Challenge: Rapid Growth of International Laws and Stakeholder Requirements



Challenges and Hurdles for a Circular Economy

Complexity

- complex products
- complex production networks
- complex supply chains

Transparency

- ingredients / composition
- contributing suppliers
- use phase information

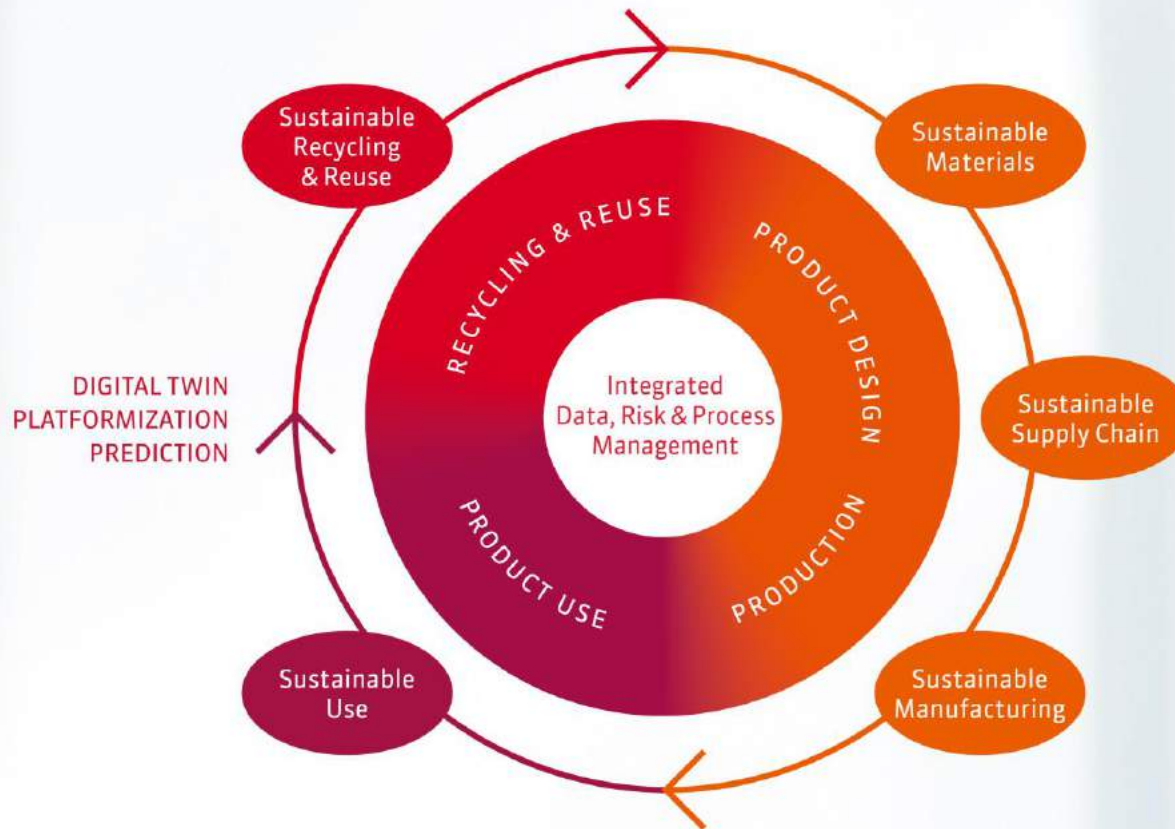
Business Models

- linear by design
- consumption <-> use
- owning <-> sharing
- dependency of growth



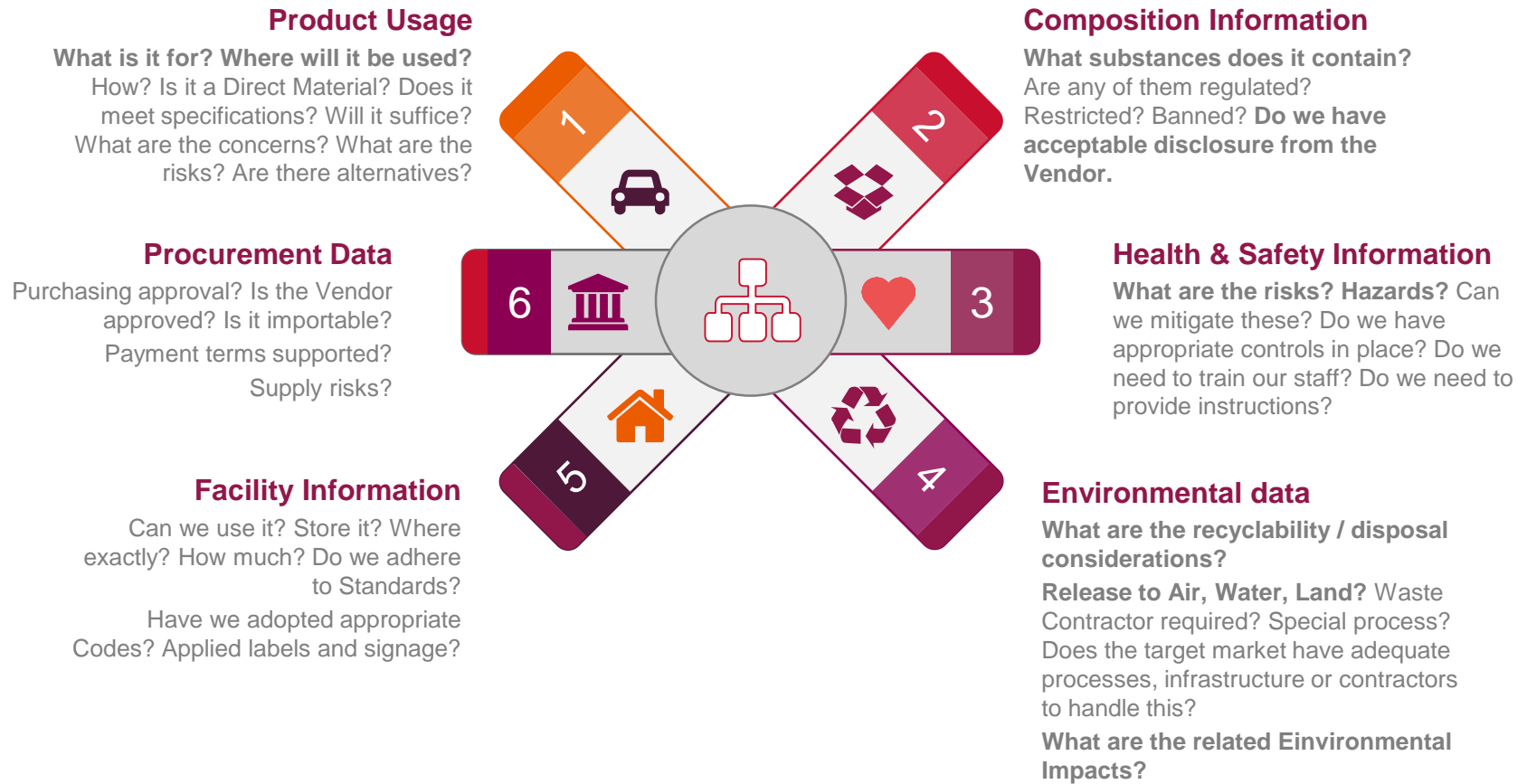
<https://www.theguardian.com/sustainable-business/2017/jul/14/circular-economy-not-magical-fix-environmental-woes-global-corporations>

Digital Circular Economy – Holistic Life Cycle Management Approach



Life Cycle Information is key enabling Circular Economy

Information relevant to be included and updated for enabling circular economy



What is a digital Twin?



Digital Twin
The key to the Integrated Value Chain

SIEMENS

Merging Real and Virtual Worlds with a Digital Twin



Unrestricted © Siemens AG 2015

Which one is real..?



What is a Digital Twin

Digital twin refers to a **digital replica of physical assets** (physical twin), processes and systems that can be used for various purposes. The digital representation **provides both the elements and the dynamics** of how an Internet of things device operates and lives **throughout its life cycle**.

https://en.wikipedia.org/wiki/Digital_twin



<http://gereports.de/post/153294823979/wort-der-woche-digital-twin>

Outlook: Digital Twin with Blockchain enabling Circular Economy

Challenges

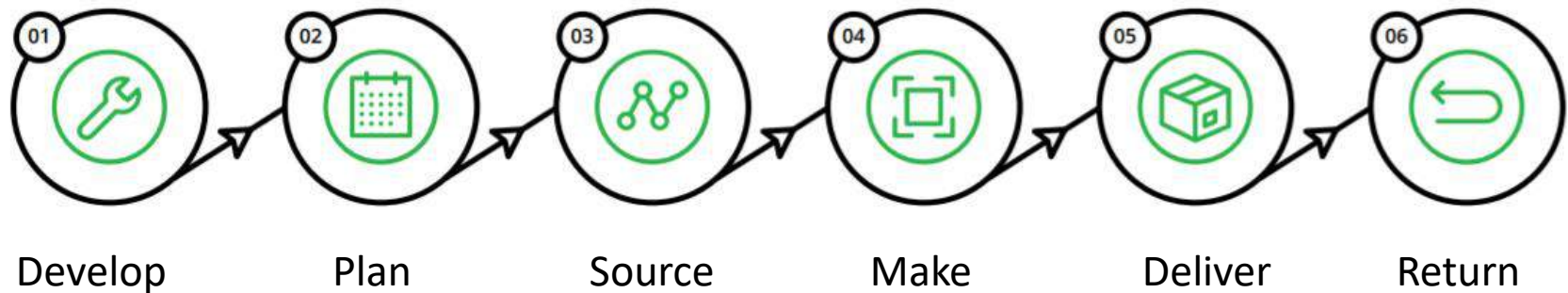
Traceability

Compliance

Efficiency

Speed & Cost

Blockchain-enabled Solutions



Outlook: Solution „Live LCA“ product-specific Life Cycle Information



Climate: 8,6 t-CO₂
Energy: 35.344 kWh

Climate: 8,8 t-CO₂
Energy: 39.344 kWh
309 € saving potential

Climate: 8,7 t-CO₂
Energy: 39.765 kWh
312 € saving potential

Climate: 9,2 t-CO₂
Energy: 46.361 kWh
Saving potential: 488 €

ifu hamburg
Member of iPoint Group



dormakaba

Funded by



Questions?
now or later



Martina Prox

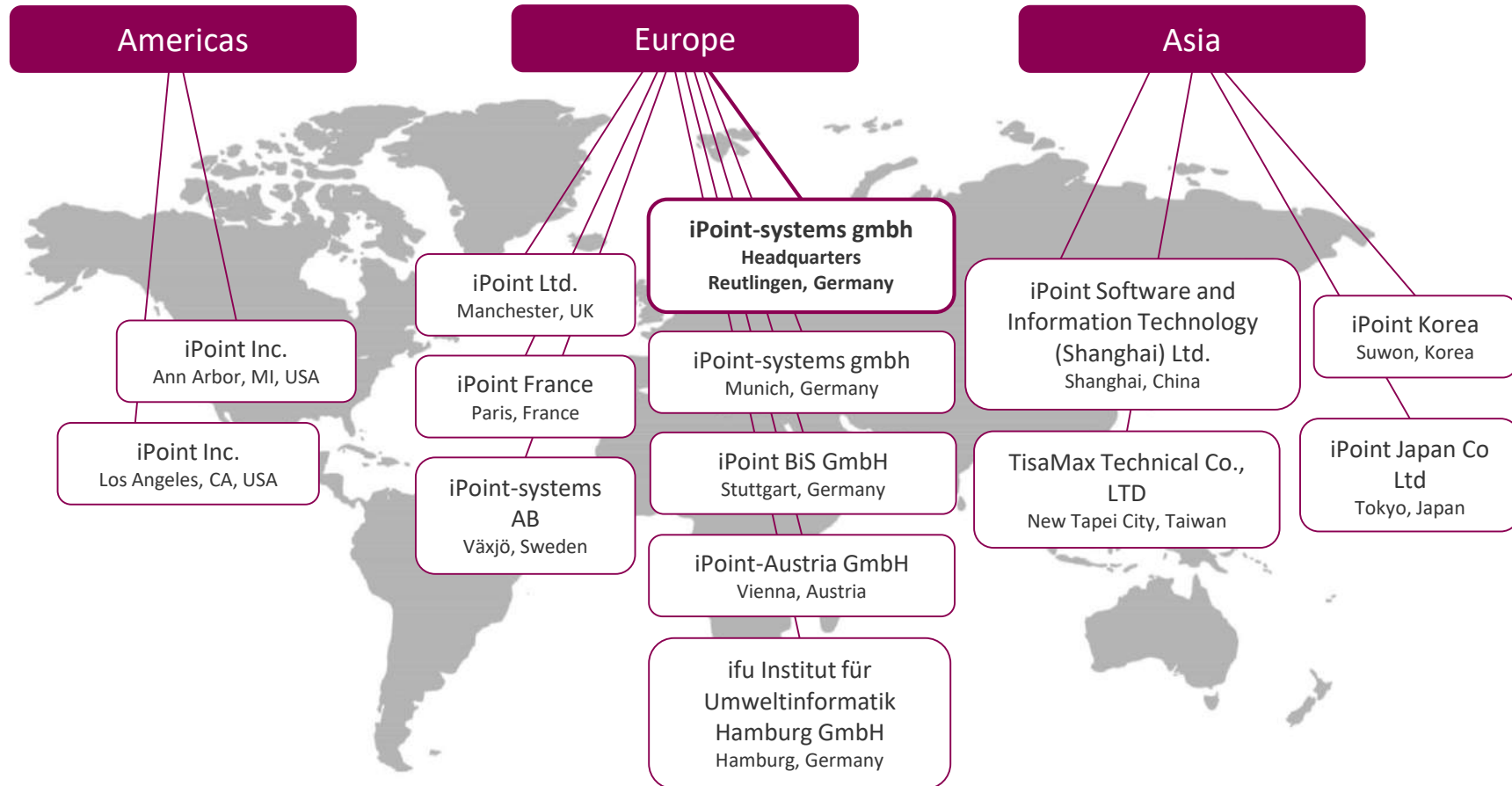
m.prox@ifu.com

martina.prox@ipoint-systems.de

+49 40 48 000 9-11

Would you like to get the presentation?

send me an email 😊 asap



Germany

iPoint-systems gmbh Reutlingen, Headquarters

Ludwig-Erhard-Straße 58
72760 Reutlingen
T: +49 7121 14489-60
F: +49 7121 14489-89
info@ipoint-systems.de

Munich

Therese-Giehse-Platz 6
82110 Germering
T: +49 89 800 6588-18
F: +49 89 800 6588-20
info.muc@ipoint-systems.de

iPoint BiS GmbH Stuttgart

Wankelstr. 14
70563 Stuttgart
T: +49 711 469 728-70
F: +49 711 469 728-99
info@ipoint-bis.com

ifu – Institut für Umwelt-informatik Hamburg GmbH

Hamburg
Max-Brauer-Allee 50
22765 Hamburg
T: +49 40 480 009-0
F: +49 40 480 009-22
info@ifu.com

USA

**iPoint Inc.
Ann Arbor**
255 East Liberty, Suite 287
Ann Arbor, MI 48104
T: +1 248 282-4085
F: +1 248 886-9121
info@ipointinc.com

Los Angeles
25350 Magic Mountain
Parkway, Suite 300
Valencia, CA 91355
T: +1 248-707-0350
info@ipointinc.com

Austria

iPoint-Austria GmbH Vienna

Ignaz-Köck-Straße 10
Top 3.04
1210 Vienna
T: +43 1 2720370-10
F: +43 1 2720370-11
info@ipoint-austria.at

France & Benelux

**iPoint-systems gmbh
Paris**
T: +33 788 919 985
france@ipoint-systems.com

Sweden

**iPoint-systems AB
Växjö**
Framtidsvägen 16
SE-351 96 Växjö
T: +46 (70) 6405489
info@ipoint-systems.se

UK

**iPoint Ltd.
Manchester**
Unit 10135
PO Box 4336
Manchester, M61 0BW
T: +44 1204 819051
F: +44 1942 859199
info@ipoint-systems.com

China

**iPoint Software and Information Technology
(Shanghai) Ltd.**
Shanghai
Room No. 331, Catering Part 2, 3F Huadu
Building,
Zhangyang Road 828 – 838,
China (shanghai) Free Trade Pilot Zone
Shanghai, China
T: +86 130 6505 3813
info-china@ipoint-systems.com

Japan

**iPoint Japan Co Ltd
Tokyo**
Oak Minami-Azabu Building 2F
3-19-23 Minami-Azabu, Minato-ku
Tokyo, Japan 106-0047
T: +81 3 4580 1273
info-japan@ipoint-systems.com

South Korea

**iPoint Korea
Suwon**
Boeun bldg 304, 1029-8
Yeongtong 1-dong
Yeongtong-gu
443 815 Suwon-si, Gyeonggi-do
T: +82 31-203-4570
info-korea@ipoint-systems.com