



Nemera



IPAC-RS Roundtable Part II (2/7/23)

IPAC RS Roundtable part II

Sustainability Drug Delivery Devices

Feb 07 2023

CONFIDENTIAL

we put
patients
First

Your Drug Delivery Device Solutions Partner

- We develop & manufacture devices that truly improve patients' lives
- Over 60 patients use our devices every second
- Global Sales 2021: €430m
Over 1.5 billion devices sold annually in 54 countries
- International footprint
6 manufacturing plants in Europe and America
- Global workforce: over 2,700 people
Strong patient-centric & quality culture
- Holistic product and services offering to customers
From early concept innovation to large scale manufacturing,
we support your combination product



Our holistic offering across major drug delivery routes

Products

Nemera proprietary drug delivery devices

Services

Contract Development & Manufacturing

Ear, Nose, Throat



Ophthalmic



Parenteral



Inhalation



Dermal



Oral, Vaginal, Rectal



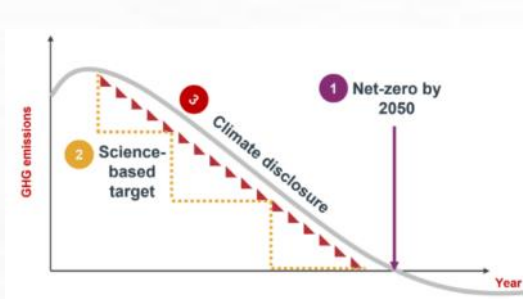
Capabilities

Insight Innovation

Process Engineering and Industrialization

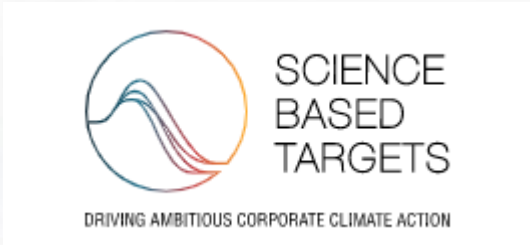
Clinical and Commercial Manufacturing

We are moving towards a sustainable future



Net zero ambition

Long term strategic commitment



SBTI driven CO2 reduction roadmap

Key focus on carbon footprint reduction



Solid CSR / ESG holistic approach backed up by Ecovadis referential

Continuous improvement, involving all functions

- ✓ Company wide approach, relying on proven referentials, focusing on simple, concrete and measurable actions.
- ✓ Constant adaptation to the evolving consensus listening to all stakeholder requirements

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01

Markets trends and clarifications

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User & market expectations

The market is expecting some substantial actions regarding sustainability in pharma ecosystem

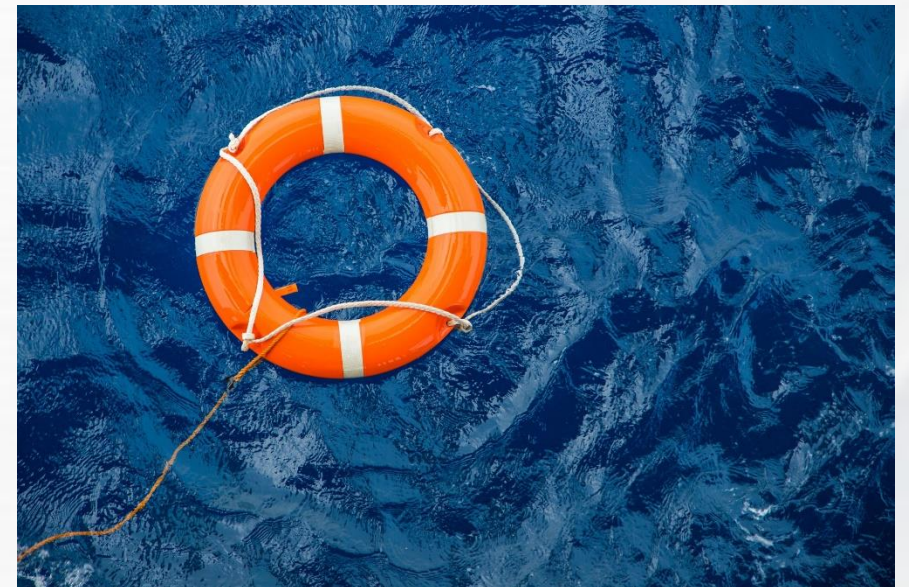
There is not a one-size-fits-all solution to revolutionize the market towards a more planet friendly business

And by no mean these solutions should be business captive or proprietary owned



Key challenges we found during this journey

- „Buy in of all stakeholders“ *(Entire supply chain up to end user)*
- Complex regulatory landscape *(Each delivery device design has its specifics)*
 - *Change control process and equivalency verification in supply chain*
 - *Patient Safety and verification of drug delivery efficacy*
- Patient convenience and “change culture”
- Risk averse industry for different reasons
- No ECO Design standard and evaluation
 - *Eco Design is just a „model“*
 - *How to evaluate and “what is in for me”?*



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02

Contributing to (more) sustainable devices

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Nemera decision and key commitment to implement Eco-design

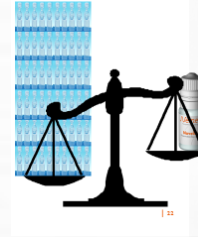
Start humble. Keep it simple.

- A dedicated program was initiated back in **2014**
- Main focus : **early development phases**, where there is more freedom to play around « **sustainability by design** »
- It consists of a simple and basic process, to
 - **Raise team awareness** when generating and **selecting concepts**
 - **Animate the natural interest of involved individuals to protect nature**
 - **Enable teams to make decisions**

“INNOVATE” to “green” means looking into the entire value chain

Few examples

- **Reduction of materials** – weight, (transport) volume, fewer different materials
- **Low impact material selection** – incl. recycled/recyclable materials, low energy materials, ...
- Use of **standard modular components** to create a complete product range
- **Optimize production techniques**
- **Reduce impact** at user stage, **optimize lifecycle**
- **Optimize end of life** – reuse of product, recycling, ...



1:8 plastic per dose ratio
1:25 drug waste
1:9 overall packaging volume



12% savings in transportation and storage volumes



Disconnect electronic module from the disposable

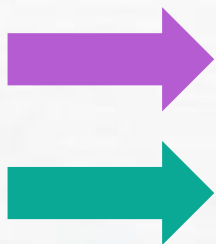
Smart design, optimizing mixed-waste while meeting user expectations, and cost effectiveness

Nice initiatives ... but is it really it ?

- Beyond few quick win solutions, moving into a truly integrated sustainable approach requires a comprehensive plan:
 - Neither the market nor end users are expecting to **compromise on Health basics : safety and efficacy**
 - Substantial changes have impact **upstream** (raw materials sourcing, ...) and/or **downstream** (regulatory pathway, user experience, ...)



In this tough, complex environment, we have to have



A structured roadmap and regulatory assessment to move along the sustainability integration in our processes

An active collaboration across many players from the ecosystem, acting as one team

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03

How to we make drug delivery Devices more sustainable?

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There is no recipe to build a comprehensive sustainability roadmap

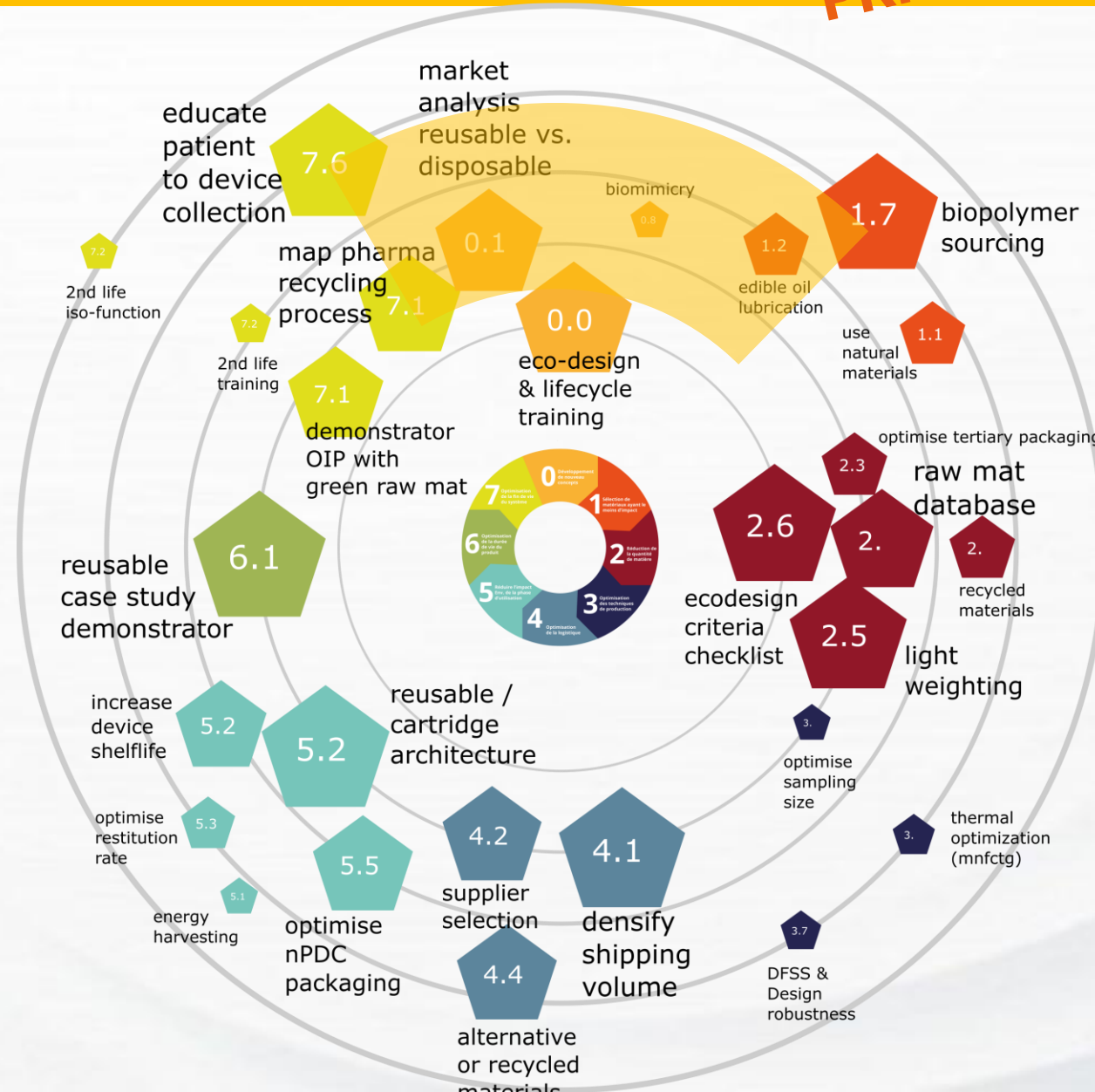
- 2022 : Eco-design workshop together with “Pole Eco-Conception” and 18 multidisciplinary volunteers within development and central teams
- A framework was embedded into the Lifecycle framework of our activities
- Each pillars is following the principles below



- **Generate ideas**
- **Assess scalability**
- **Leverage market knowledge**
- **Align with partners**
- **Prioritize actions**
- **Execution**

Eco-Design culture, training & understanding

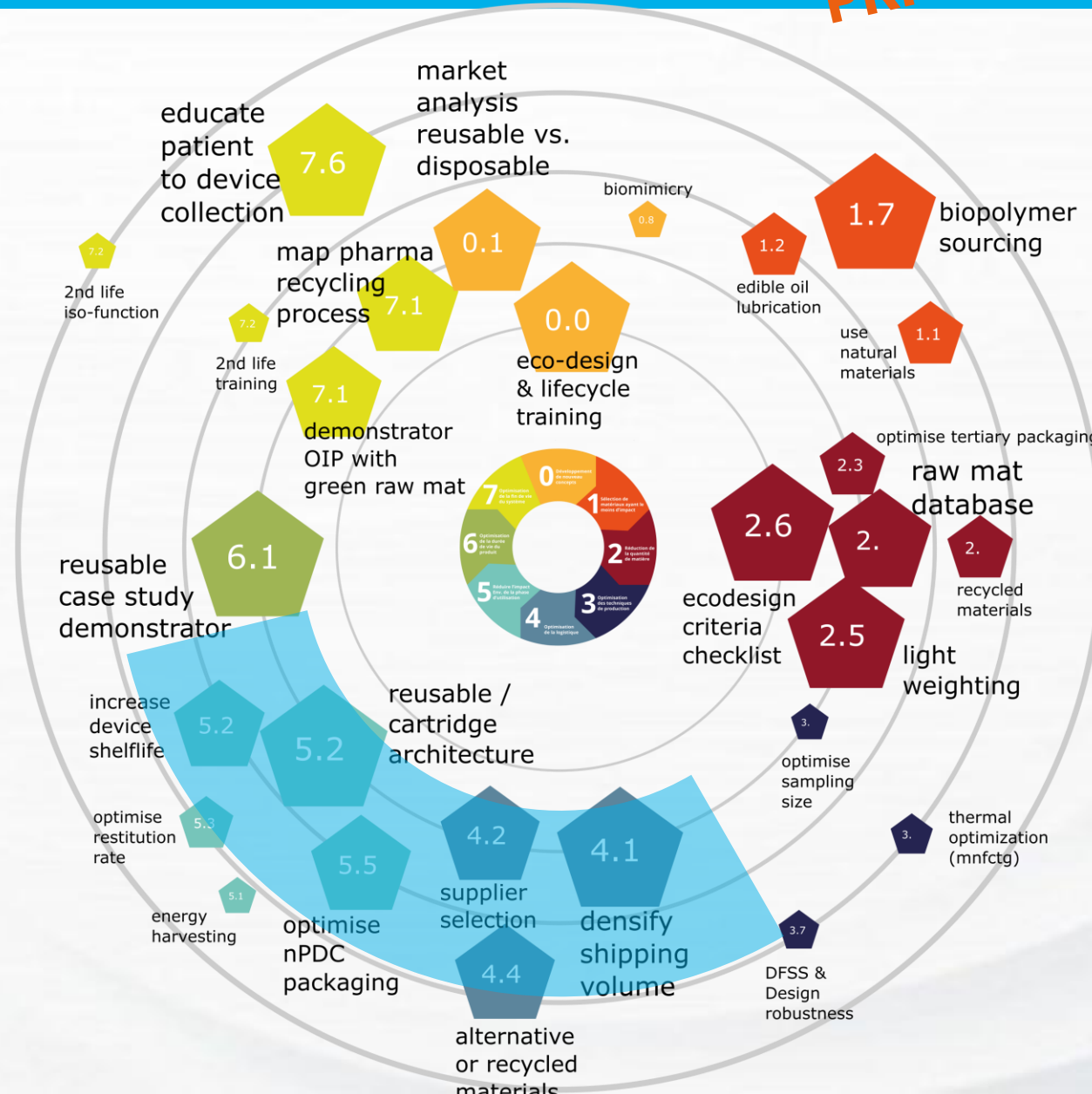
PRIORITIES





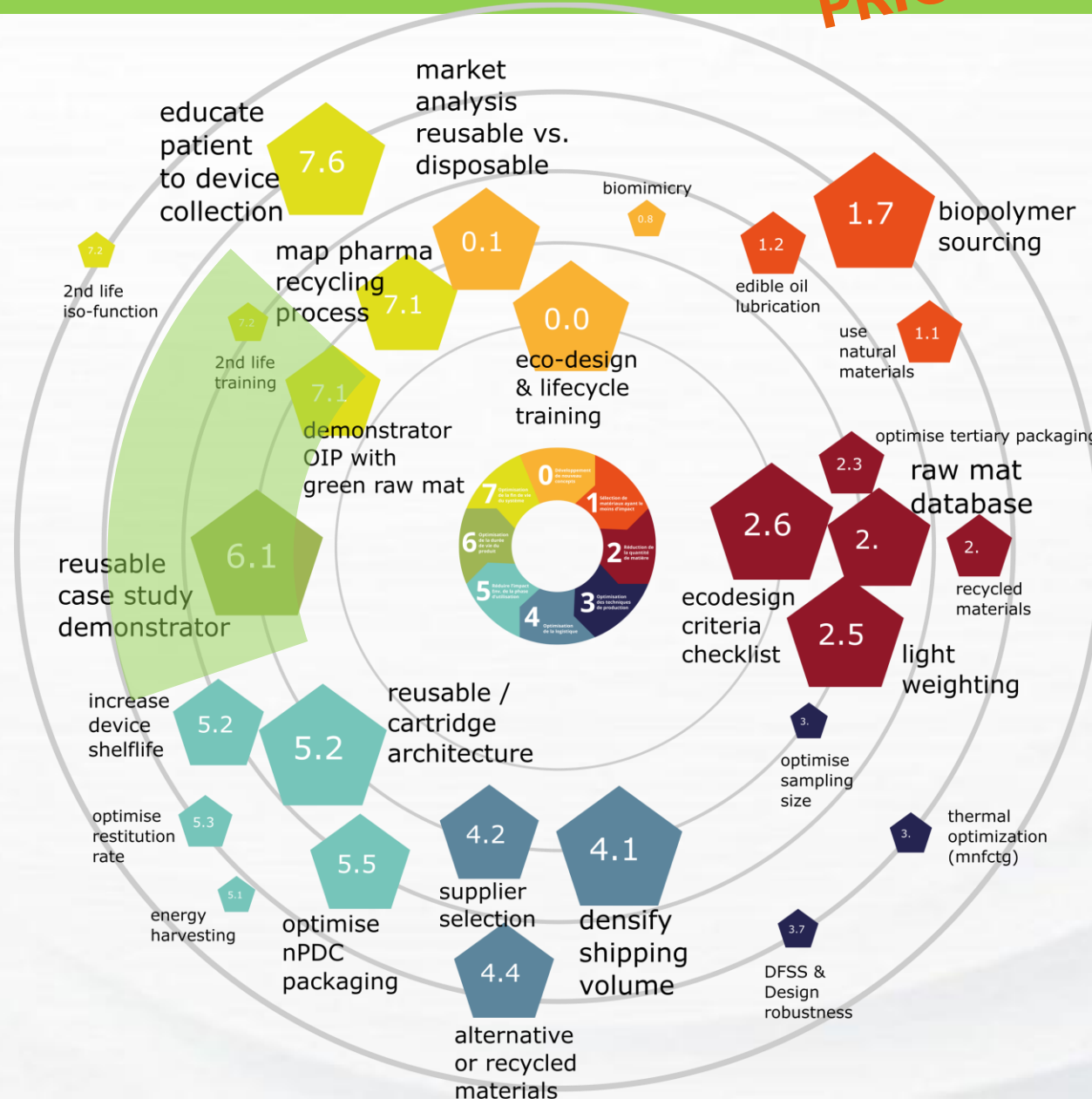
Design and Supply Chain Optimization

PRIORITIES



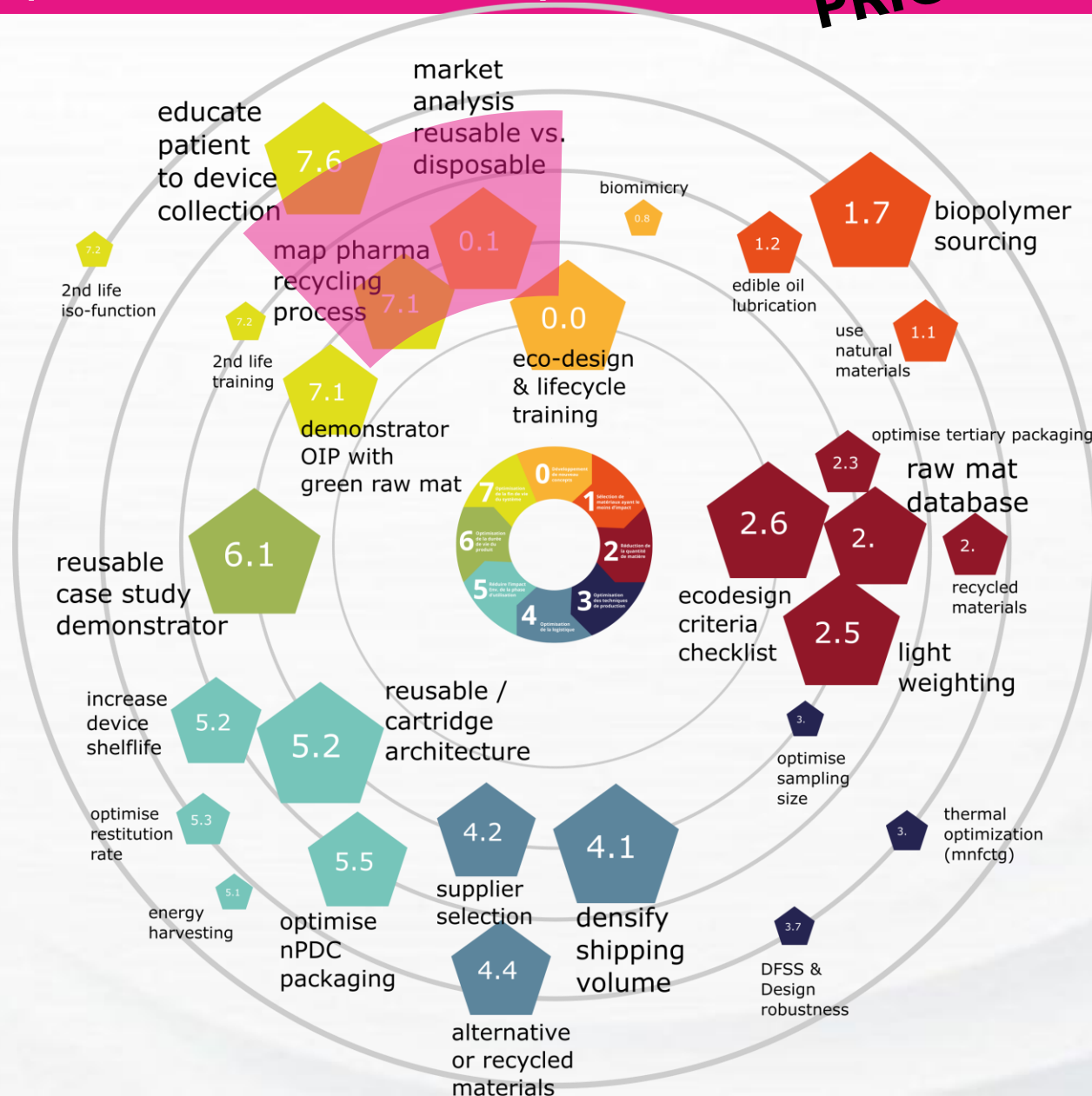
Reusable/disposable architecture

PRIORITIES



Educate patients and pharmaceutical industry

PRIORITIES



Strategic sustainability roadmap is our commitment

Along these 5 pillars, our sustainability roadmap has shown that the **highest impact** can be made **by input materials** and the ability to **recycle** components, or the entire device.



Whatever your plan is, risk assessment and mitigation remains a key for success

- Neither the market, the regulators nor end users are expecting to **compromise on Health basics : safety and efficacy**
- Substantial changes have impact **upstream** (raw materials sourcing, ...) and/or **downstream** (regulatory pathway, user experience, ...)
- Substantial Change control processes are required
- Ask and answer the right questions in your Risk assessment and involve multidisciplinary teams



Thank you !

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