



Circularity begins with **DESIGN**

Maria Rita O. Matute, Executive Director
DESIGN CENTER OF THE PHILIPPINES

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25 March 2022



By shifting the conversation and context of design from products and communication to systems, services, and strategic solutions, designers are making their presence felt far beyond the borders of corporate design departments by tackling “wicked problems” that governments and traditional bureaucracies have been unable to resolve.

Michael Westcott, former president of the Design Management Institute



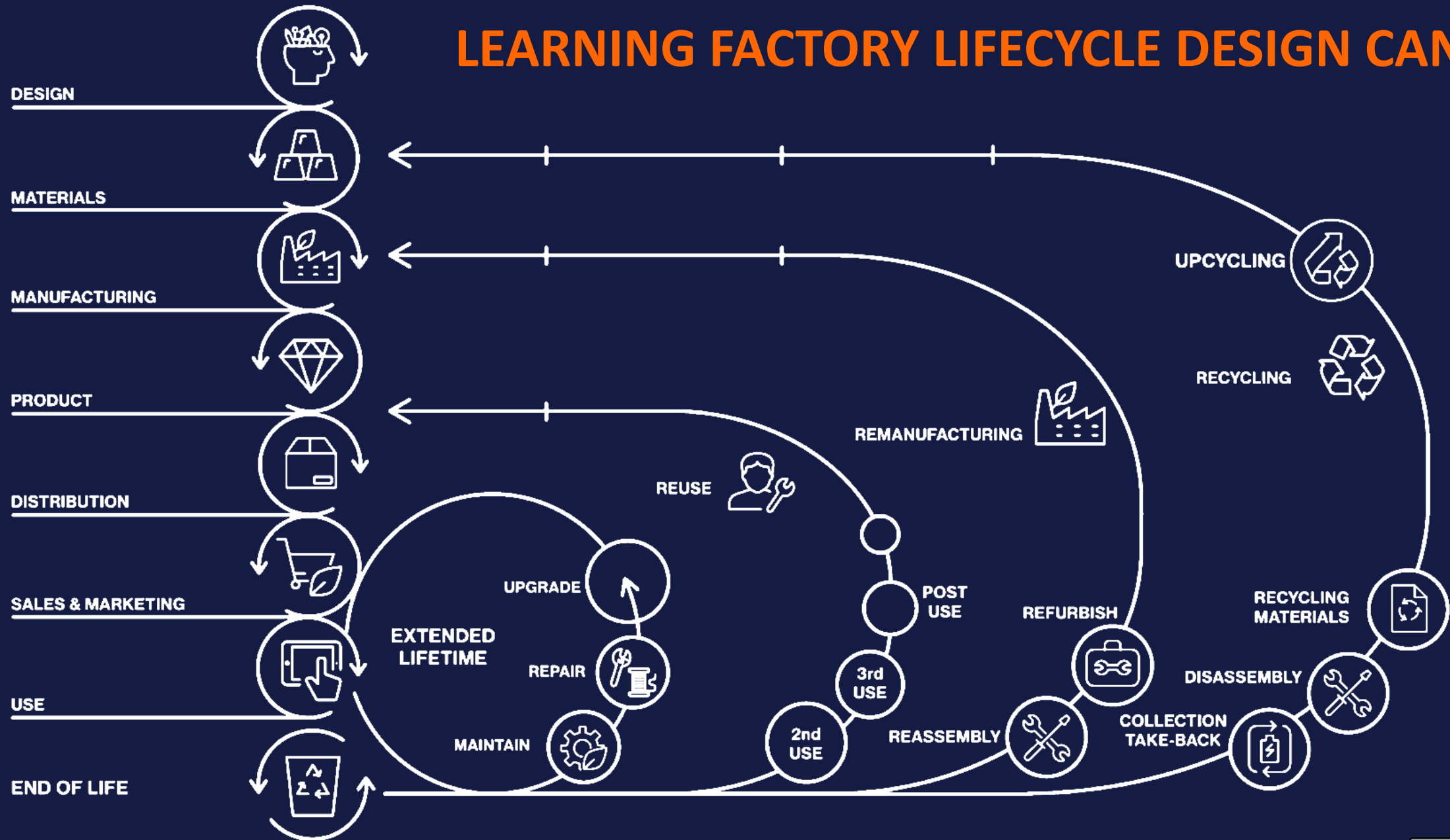


**“ 80%
of environmental pollution and
90% of manufacturing costs are the
result of decisions taken at the
product design stage. ”**

Ecodesign directive: from energy efficiency to recycling
European Parliament



LEARNING FACTORY LIFECYCLE DESIGN CANVAS





pinyapel™



BAKONG



pinyapel™

Pinyapel is a project under Design Center's Materials Research and Development Program. The program explores the potential of agricultural waste and overlooked resources as raw materials for various product applications.





MATERIAL EXPLORATION

20
19



Pinyapel
by Oro Handmade
Innovations Inc. (formerly CDO
Handmade Paper Crafts)



**Corrugated
Pinyapel**
by Ideatechs Packaging
Corp.



**Pinyapel Cup
Sleeves**
by Ideatechs Packaging Corp.



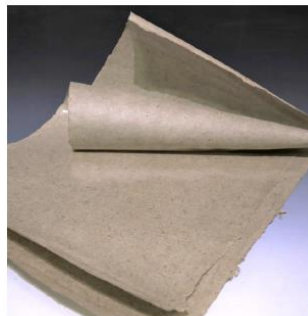
Pinyapel Gift Bag
by Ideatechs Packaging Corp.



Pinyapulp
by Oro Handmade
Innovations Inc. (formerly CDO
Handmade Paper Crafts)



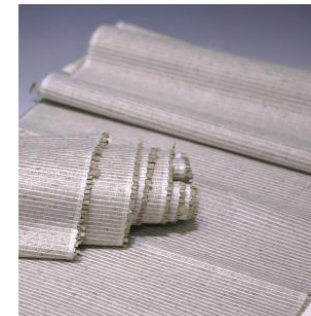
**Pinyapel
(90 & 120 gsm)**
by Oro Handmade Innovations
(formerly CDO Handmade
Paper Crafts)



**Laminate-
Coated Pinyapel**
by Manila Laminations Inc.



Spun yarns
using Pineapple Leaf Fiber
(PALF) Waste
by DOST-PTRI



**Handloom
Woven Mats**
using Pinyapel Strips
and Twisted Pinyapel
by DOST-PTRI



Biocomposites
using Pinyapulp and Pineapple
Leaf Fiber (PALF) Waste via
Compression Molding
by Manila Automat

20
20



**Soy Ink Printing
on Pinyapel**
using Offset Printer
by Small Piece of Paper



**Pulverized
Pineapple
Leaf Fiber (PALF)
Waste**
by DOST-ITDI



**Bio-composite
pellets**
using Pineapple Leaf Fiber
(PALF) Waste via Twin Screw
Extruder
by DOST-ITDI



Wallpaper
using Pinyapulp
by MASAECO



Decorative Bowl
using Pinyapulp
by MASAECO



Wall Tile
using Pinyapulp
by MASAECO



**Placemats/
Table Runner**
using Twined Pinyapel
by Flora Creatives



Baskets
using Twined Pinyapel
by Flora Creatives



Bucket Bag
using Twined Pinyapel
by Flora Creatives



Biodegradable Film
using Pineapple Fruit Waste
by MR Pinyapel Team

20
21



pinyapel™

**MATERIAL
EXPLORATION**



Project Partners

4 Material Suppliers
15 MSMEs
3 Government Agencies
7 Designers



Product Development

4 Sectors
145 Design Concepts
49 Product Collections
136 Products Produced



IP Assets

24 Collections
76 Design Concepts



Ideatechs

Printed packaging using *Pinyapel*
(specialty paper from pineapple leaves)




pinyapel[™]

BAKONG

The Bakong Project not only provides a way-forward towards the achievement of sustainable economic growth, but also contributes to reducing negative environmental impact, rejuvenation of empowering livelihood, and the invigoration of the local design innovation ecosystem.





**LAMINATED
BAKONG STEM**



**HANDMADE PAPER
FROM STEM**



**MOULDED PULP
FROM STEM**



**FIBER EXTRACTION,
BLEACHING, AND
DYEING**



**FIBER EXTRACTION,
BLEACHING, AND
MACRAME**



HANDLOOM WEAVING



SPUN THREAD

BAKONG

**MANIPULATION &
EXPLORATION**

BAKONG

BIOPLASTICS DEVELOPMENT





Project Partners

16 Collaborators

(Fablabs, Government,
Manufacturers, Foundation, NGO)



Product Development

11 Design Concepts

**18 Concepts under
development**



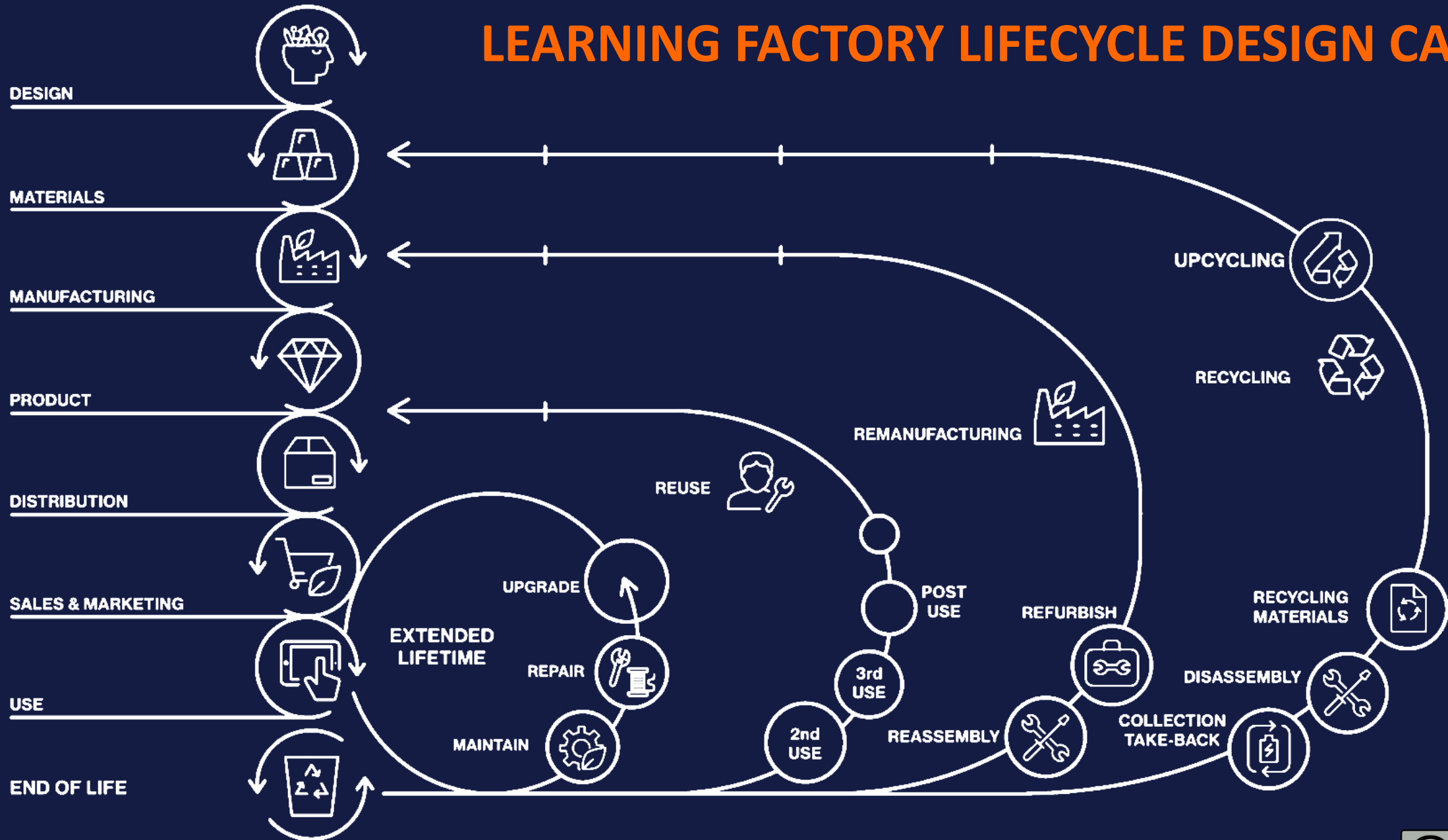
IP Assets

Bakong Logo

Bakong Fabric



LEARNING FACTORY LIFECYCLE DESIGN CANVAS





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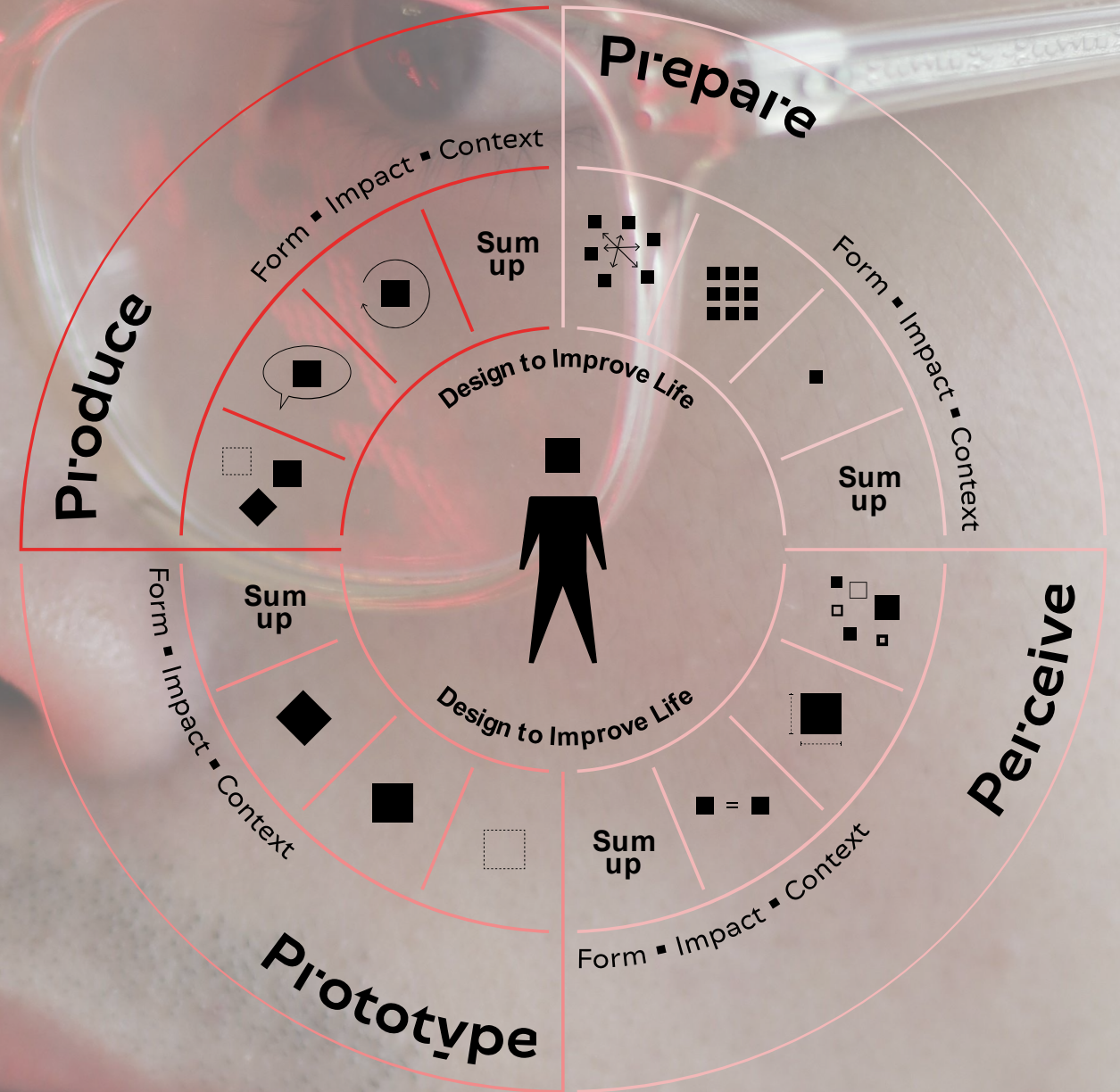
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The
Index
Project

Design to Improve Life: The Compass

The Compass is the backbone of all The Index Project's learning and business development initiatives. It's a problem-solving tool that uses design is a driver for solving real-world local and global needs with a **strong focus on economic, environmental and social sustainability**.

The Compass empowers purpose-driven visionaries who are passionate about **design, sustainability, investing and education** to lead and to invest in the next generation of design leaders.





FORM | FUNCTION | INNOVATION | MALASAKIT



PEOPLE



PURPOSE

MALASAKIT

PLANET



PROSPERITY











ALTUM



circulo



FABLAB
UP COLLEGE OF FINE ARTS



Sentinel[®]
PLASTIC MANUFACTURING CORPORATION



POLYMER & COLOURS, INC.

Enviro**tech**
Envirotech Waste Recycling Inc.




Nature's
Legacy



RIR
RAGS2RICHES

B E A V A L D E S



Malayana



BalaiKamay



a.garcia



MODUBAKO





Thank you.

