Creating a Better World
Understanding the Metrics of Going Green

HermanMiller

Carbon footprint

Certified wood

Regional materials

Recycled content

Labor practices

Renewable resources

Life cycle assessment

Land use

Recyclability

Quality

Certified organic

Zero toxics

Community service

Durability

Greenguard

Peak oil

C2C

Life cycle thinking

PVC-free

Renewable energy

Timeless design

Water footprint

Biodiversity

Safety

Environment

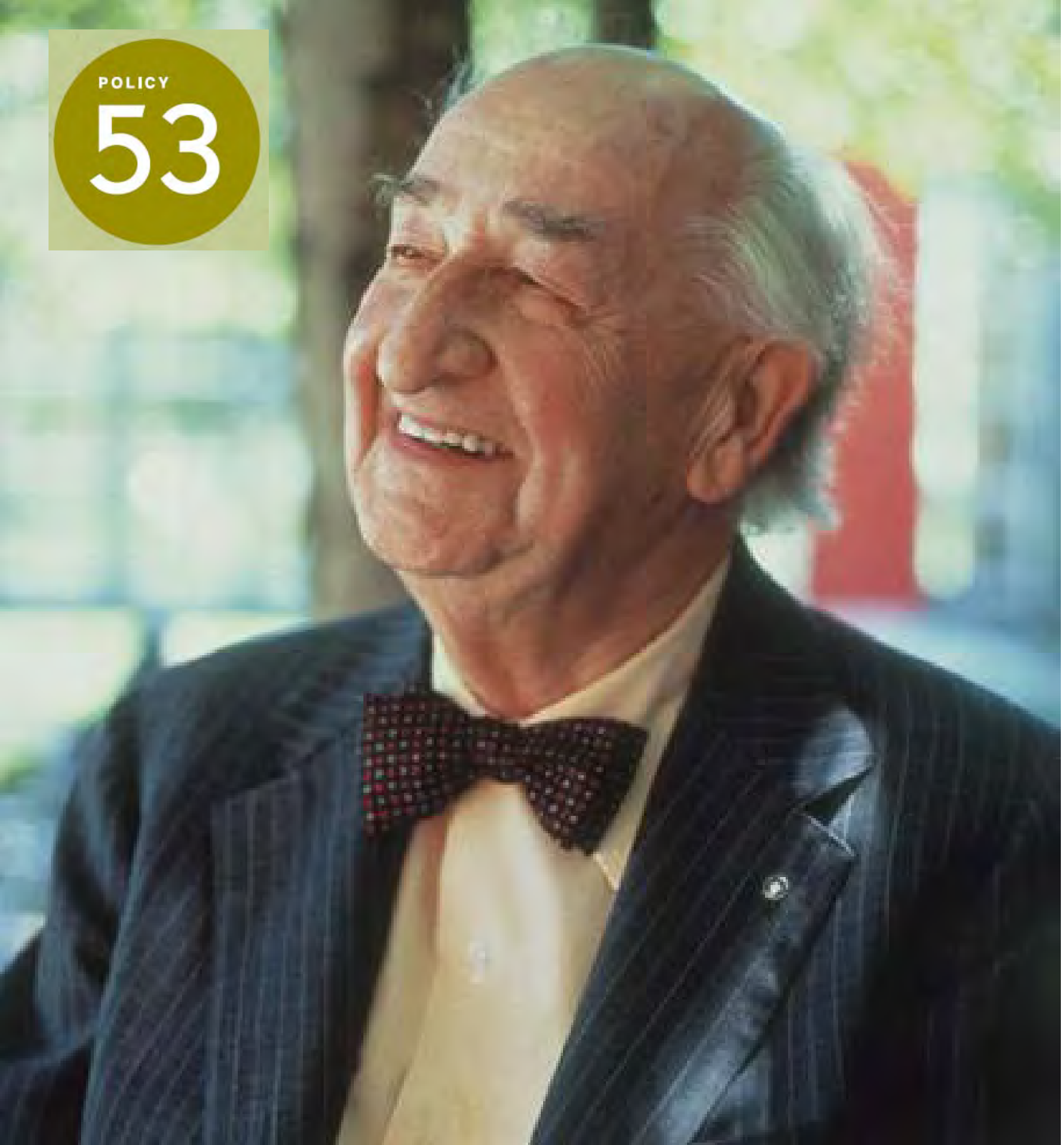
Health

Climate change

How do our Clients and Suppliers Measure Sustainability?

What do bees have to do with it?

The power of storytelling



Why did our founder have a garden on company land?

Early goals

Current leadership

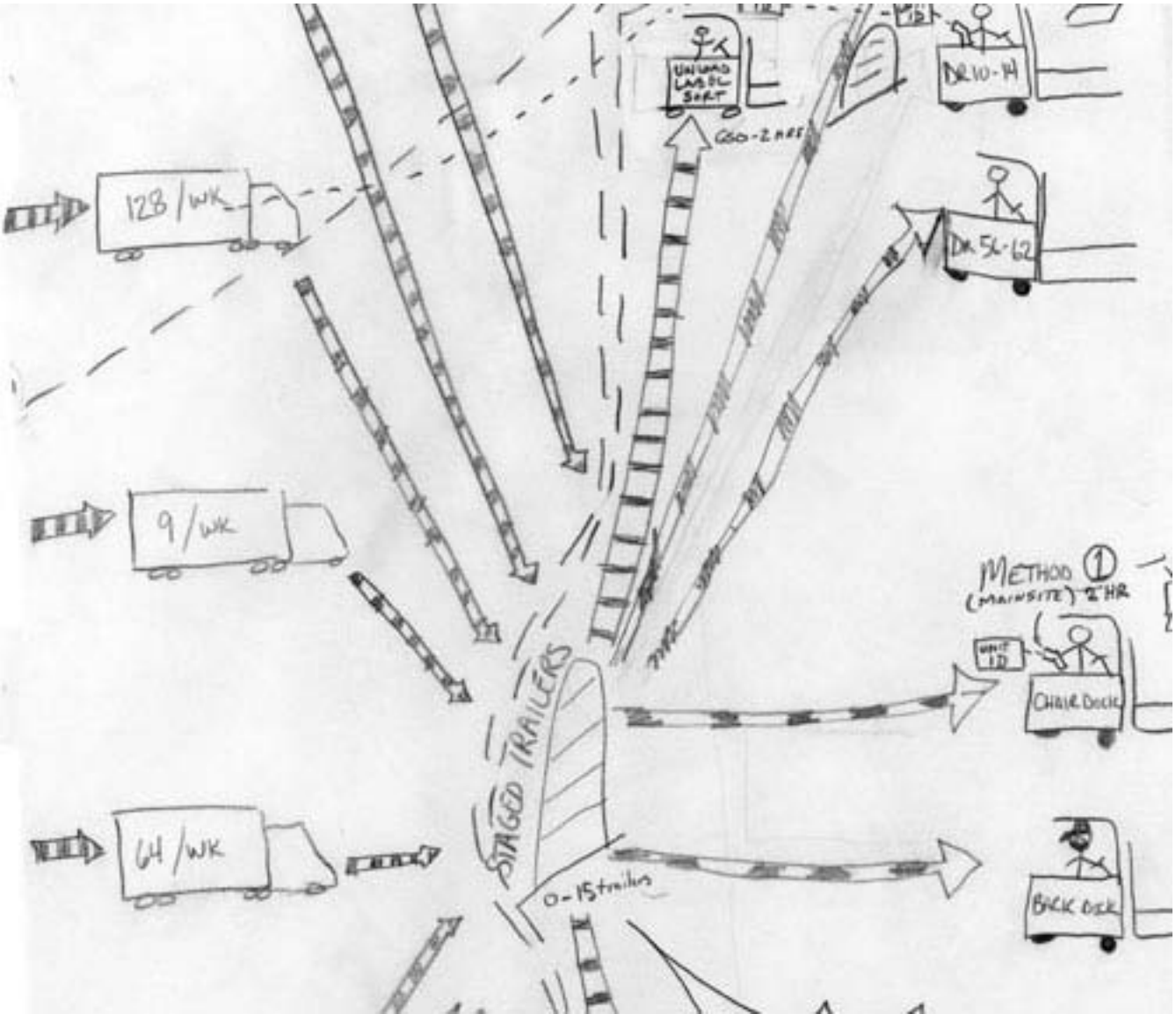
Balancing modesty with marketing

Perfect Vision Goals

- Zero landfill
- Zero hazardous waste
- Zero air and water emissions
- 100% renewable electricity
- 100% sales from DfE approved products
- Carbon neutral

Overview

Herman Miller Performance System



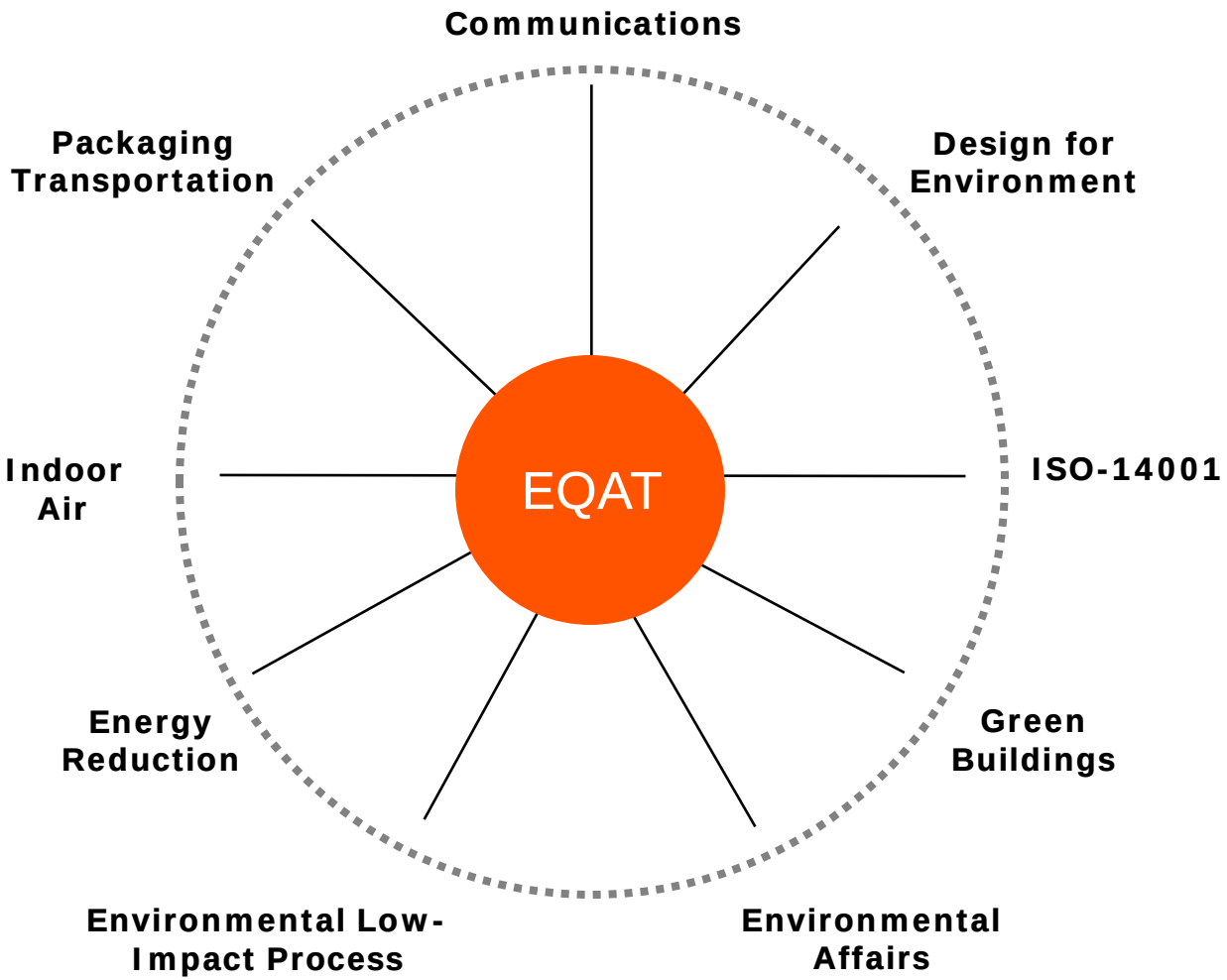
- Launched HMPS 1996
- Problems (cost, delivery, etc.)
- Innovative employee-owners are “unrelenting problem-solving.”
- HMPS is as much about culture and people development as it is about processes.

HermanMiller

What to look for?

- Management Support
- Structure
- Strategy & Metrics
- Results

We embed sustainability and HMPS in our structure.



HMPS is used in :

- supply chain
- operations
- office
- dealers

Green *and* Lean Results

	2000	2005	2009
Sales NA ($MM)	$1.59	$1.1	$1.2
Safety (incident rate)	9.7	14.7	2.8
Reliability	77%	99.4%	99.3%
Inventory (turns)	20.0	49.9	50.2
Quality (PPM)	8,125	1,382	1,368
Real Estate (sq ft)	3,257,000	1,890,000	1,890,000

Green *and* Lean Results

Perfect Vision 2020	1994	2009	2020
Air (tons)	266	19	0
Water (MM gallons)	144	25	0
Landfill (tons)	10,500	1,463	0
Energy (% Green-e)	0	100%	100%
Haz. Waste (tons)	291	25	0
Design for Environment (%)	0	51	100%

We benefit from the business side of sustainability.

$2.4 million in revenues from recycling

$500,000 in cost avoidance through efficiency programs

Savings on disposal and permit fees

We will get 100% of sales from DfE-products by 2020.

Over 54% in January 2011

Designing Better Buildings

How did our concern help form a seal of approval?

Helped found USGBC in 1993

LEED
Standards

How and why do we ensure our spaces are sustainable?

By 2020, all new spaces must be at least LEED Silver certified

Use 72% of our electricity

Use 40% of our raw materials

Produce 30% of our waste output

Generate 38% of our CO_2 emissions

Source: USGBC

Benefits from building sustainably are big.

8-9% decrease in operating costs

7.5% increase in building values

6.6% better ROI

3.5% increase in occupancy

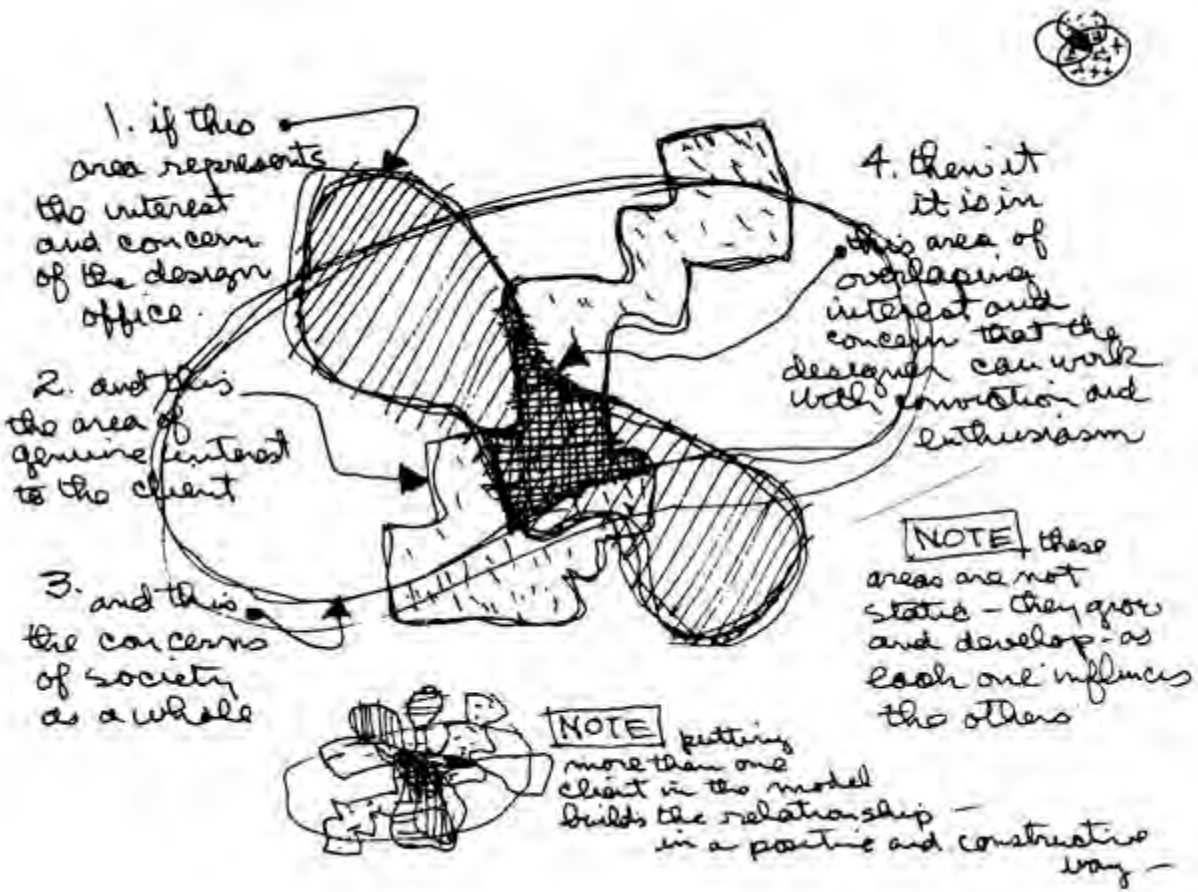
3% increase in rent

Source: USGBC

Designing Better Products

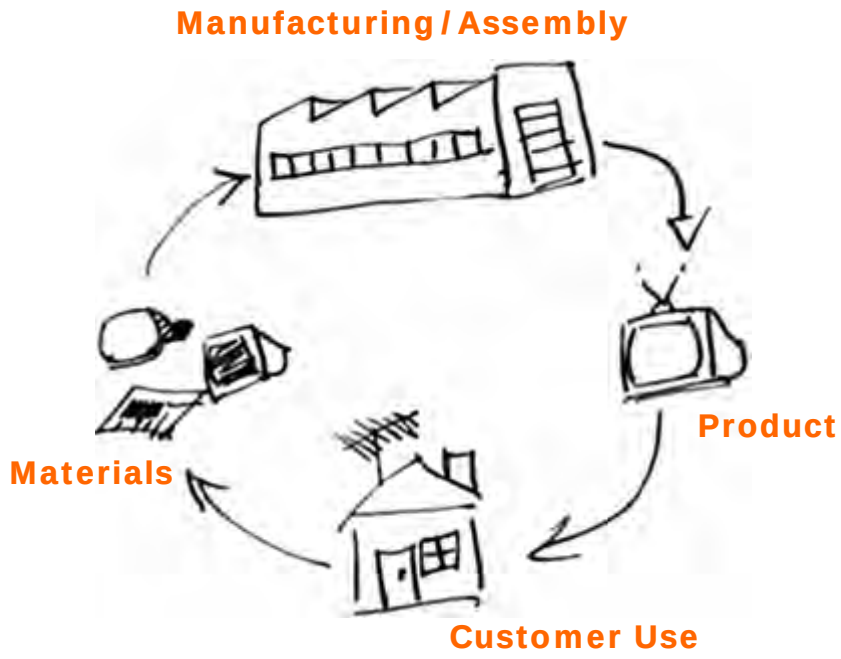
How could we walk away from $1.5M in material cost savings?

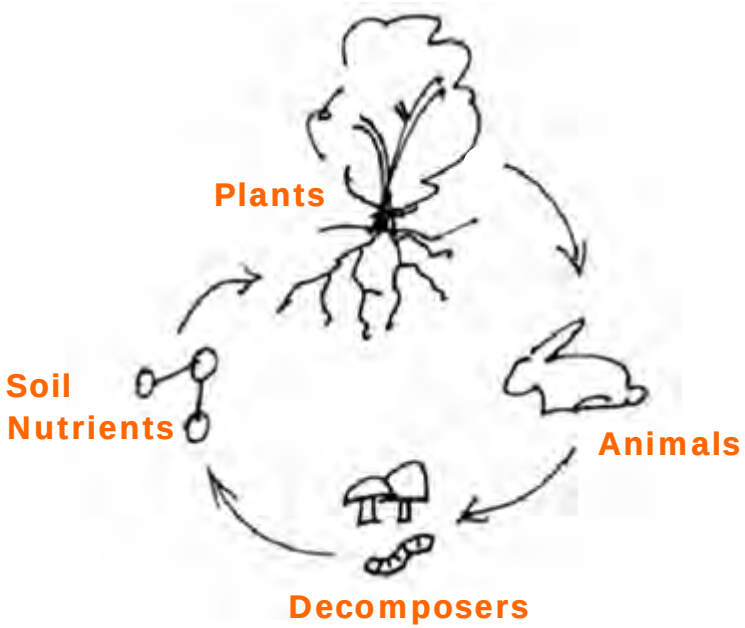
Design Constraints



"I don't remember being forced to accept compromises, but I've willingly accepted constraints."

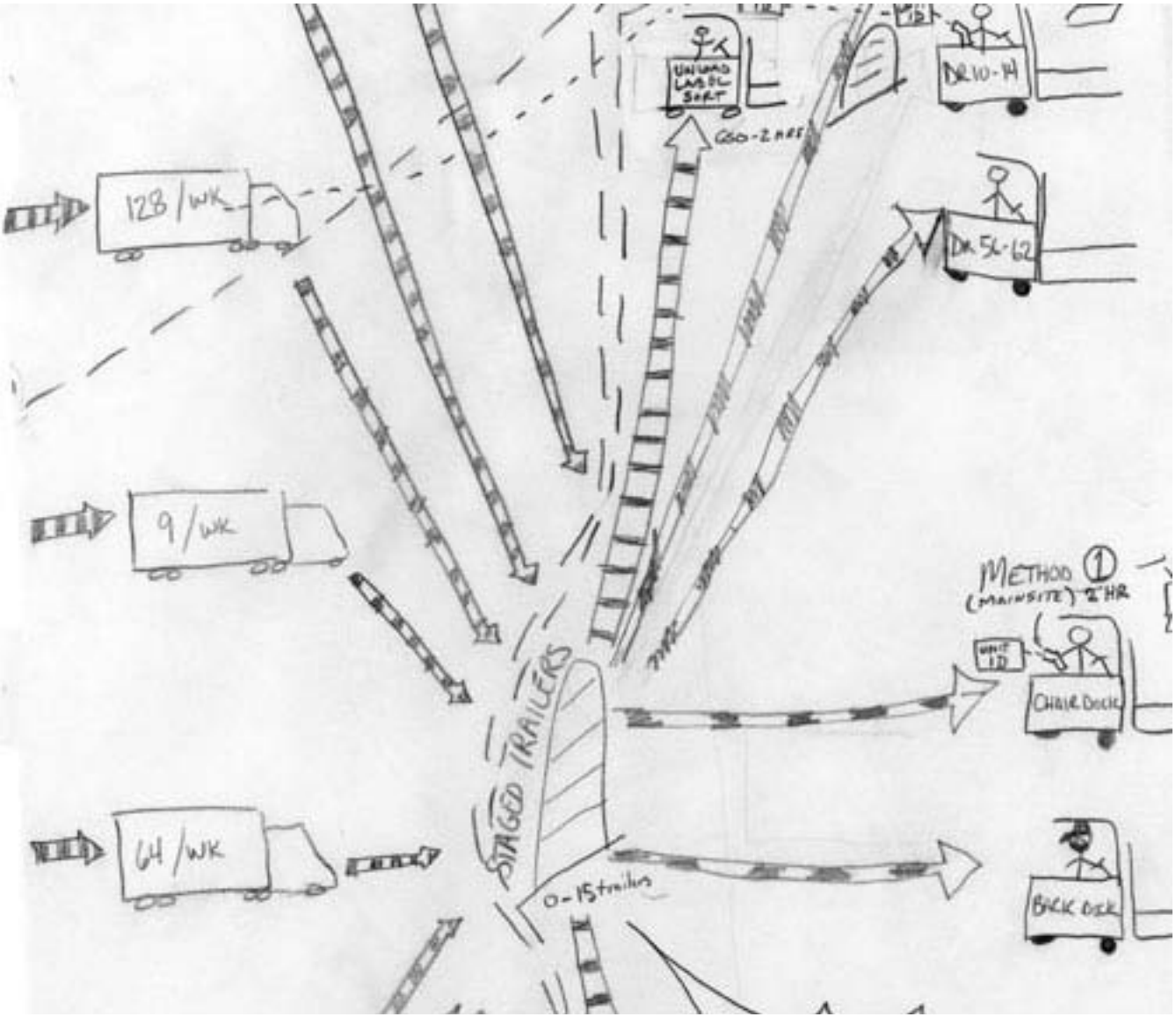
– Charles Eames





What path do we take to ensure our products are sustainable?

Source: GreenBlue



Supply Chain Integration

Map the value chain

Develop relationships

Communicate goals and expectations

Negotiate boundaries

Build trust

Share information openly

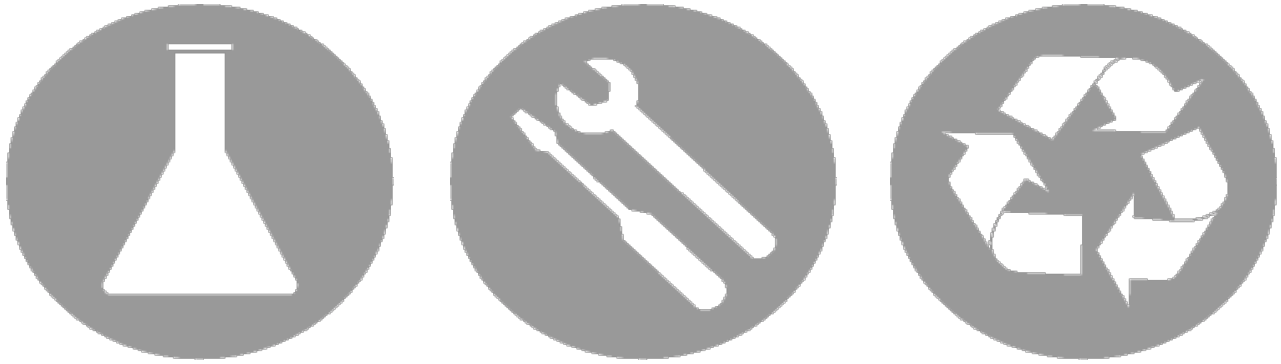
Assess materials

Innovate solutions

Design Tools: Cradle to Cradle

Eco-Effective vs Eco-Efficient

Less bad is not the same as being good.



Chemistry **Disassembly** **Recyclability**

We go to the source to get material data.

Material manufacturers

Supplier information

We avoid materials harmful to humans.

Known and suspected

From mild to severe toxicity

We focus on ecological health.

Ability to biodegrade

Impact on climate

Effect on plant and animal life

We assess chemicals in a graduated way.

Green

Little or no hazard; acceptable for use under the Cradle to Cradle Design Protocol.

Yellow

Low to moderate hazard; acceptable for use until a green alternative is found.

Red

High hazard; should be phased out as soon as possible.

Orange

Incomplete data; no indication it is problematic but a complete assessment is not impossible.

We make sure products can be easily taken apart.

Fast disassembly with common tools

Clear material identification

Easier to put together

We make recycling part of product design.

1
Corn
An annually renewable crop source is converted to starch

2
Sugar
The starch is fermented into sugar

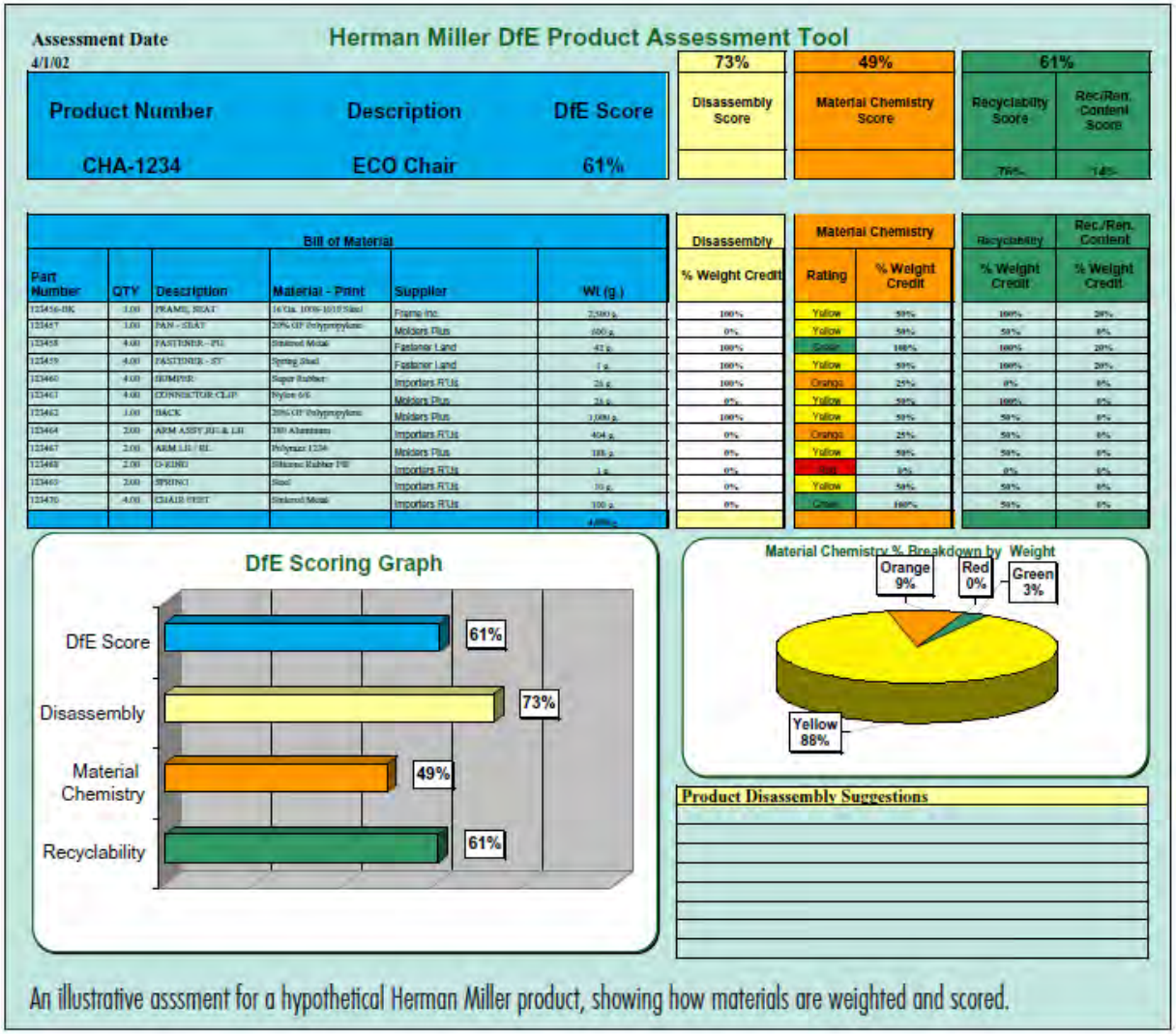
3
PLA
The sugar is converted into PLA

4
Ingeo Fiber
Ingeo fiber is extruded from PLA

5
Kira
Ingeo fibers are woven into the yarn used to make Kira

6
Compost
Kira can be composted to help grow crops

C2C Assessment



Simple metric

Applied to all products

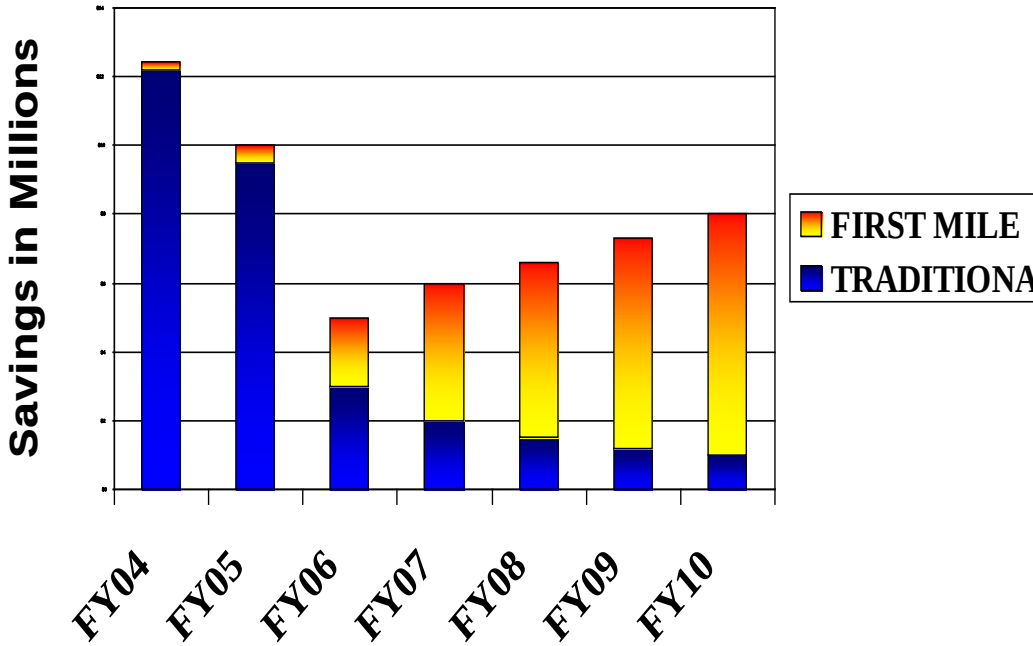
Sustainable trajectory

The First Mile

Extending HMPS into the value chain

Cost savings targets

SQP



We ship products in ways that reduce waste.

The Last Mile Dealer Program

Design Tools: Life Cycle Assessment

Source: Wall Street Journal

Life Cycle Assessment & Carbon Footprinting

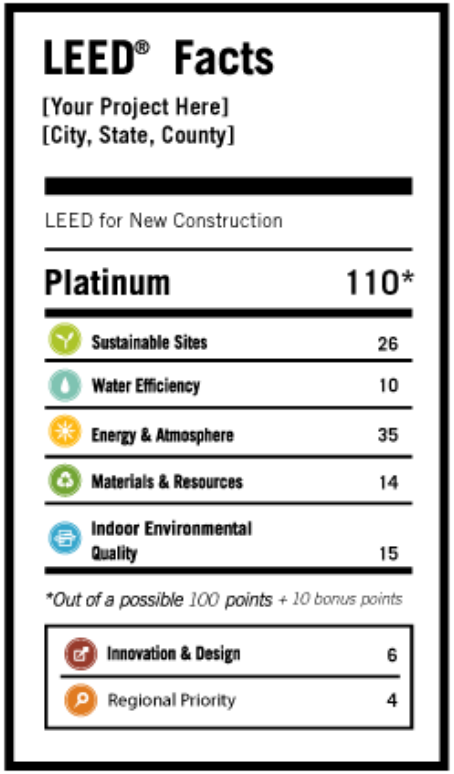
Life Cycle Assessment A Growing Trend

Terminology

- LCA – Life cycle assessment
- EPDs - Environmental Product Declarations
- PCR – Product Category Rules
- GHG – Greenhouse Gas
- Product Carbon Footprint

Standards/Legislation

- ISO 14025 – Type III Ecolabels
- ISO 14044 – LCA Guidelines
- ISO 21930 – Building Products EPD
- WRI Draft Product Carbon Footprint
- BIFMA level™



Life Cycle Assessment

Major Sources of Impacts

Material Selection accounts for >80% of impact

Product weight significantly affects results

Energy type is extremely important

Strategies to Lower Impacts

Engage Suppliers

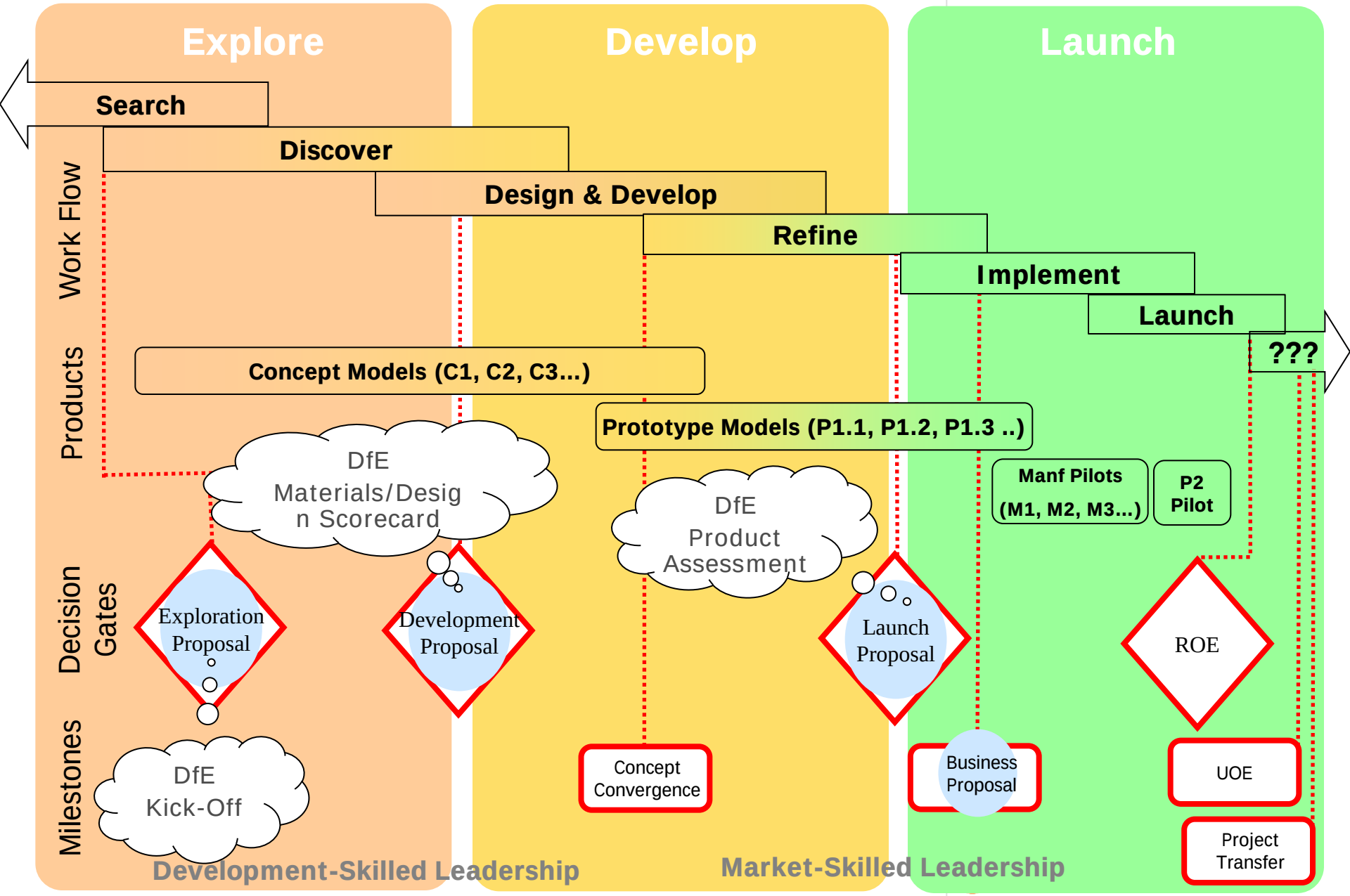
Promote Renewable Energy

Select Recyclable Materials

Establish a closed-loop recycling system

Eliminate unnecessary packaging

Workflow, Products, Decision Gates & Milestones



Our DfE standards help get our products certified.

Cradle to Cradle℠

GREENGUARD®

BIFMA level™

Reporting and involvement

Employee

Community

Summary

- Leadership requires commitment.
- Sustainable design is possible.
- Partnerships are critical.
- “Green” does not have to cost more.

“Environmental advocacy is part of our heritage and responsibility that we gladly bear for future generations.”

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