



the SUSTAINABLE MATERIALS FALLACY

MATERIAL CONNEXION

ANDREW DENT PhD

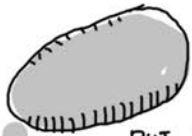
CROSS INDUSTRY POLLINATION

WE HELP DESIGNERS THINK MATERIALS FIRST!

THERE IS NO SUCH THING AS A SUSTAINABLE MATERIAL

IT MUST BE VIABLE!

WASTE NEEDS TO BE REFRAMED - IT'S NOT GROSS!



CARBON-FIBER AIRPLANE FUSELAGE

'BAD' MATERIAL - BUT THE FUEL SAVINGS IS DRAMATIC



PAPER IS LESS EFFICIENT

STYROFOAM IS MORE EFFICIENT

BUT PAPER WINS IN CIRCULAR ECONOMY THINKING



MONO MATERIALS

LAYERED PLASTICS

HOME WASTE PLASTICS

WHAT HAS DEMAND IN A SECOND LIFE?

PLASTIC

RAYON
PHA/B
CELLOPHANE

VERY FEW PLASTICS BREAK DOWN IN THE OCEAN



FISHING NETS HAVE THE MOST IMPACT

'OCEAN BOUND' PLASTICS

ECO

ALGAE ONLY IN SMALL BATCHES

BAMBOO USES GLUE

FUNGI REQUIRES COMPOST

CORK IS DURABLE

MATERIAL CHOICE IS NOT ENOUGH - THINK SYSTEMS!

GLASS



GOOD FOR LONGEVITY - LITTLE 2nd LIFE, HIGH ENERGY USAGE

METAL



DISRUPTION OF THE GLOBAL SUPPLY CHAIN WHEN STRIVING FOR HIGH VOLUME

DESIGN FOR DIS-ASSEMBLY



DESIGNING for the CIRCULAR ECONOMY

ANNA QUERALT FUENTES
ELLEN MACARTHUR FUND



85% OF MATERIAL LOST EACH YEAR

the CIRCULAR ECONOMY



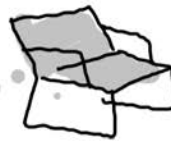
DESIGN OUT WASTE and POLLUTION



PACKAGING MADE from ALGAE



KEEP PRODUCTS and MATERIALS IN USE



RENTABLE FURNITURE



REGENERATE NATURAL SYSTEMS



DESIGNERS HAVE UNIQUE POWER

"YOU CAN'T UNSCRAMBLE an OMELETTE"



ZOOM IN to USER NEEDS

ZOOM OUT to the SYSTEM

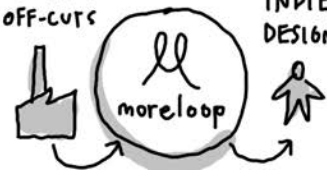
DESIGN STRATEGIES

IMPORTANT DECISIONS

PROCESS LOCK-IN

FABRIC OFF-CUTS

INDIE DESIGNERS



CIRCULAR DESIGN STRATEGY WORKSHOP



CIRCULAR DESIGN CHALLENGE

#CIRCULARDESIGNERS



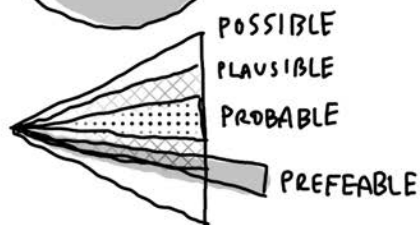
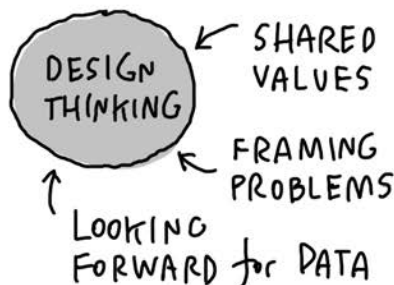
HOW MIGHT WE RE-INVENT the E-COMMERCE SHIPPING SYSTEM?

- PRODUCT AS SERVICE
- MATERIAL CHOICES
- PRODUCT LIFE EXTENSION



ACCELERATING SUSTAINABLE BUSINESS TRANSFORMATION

BILL ROBINSON
NEW FUTURES LAB



'FURTHERED' DESIGN STRATEGY CONSULTING for INNOVATION

FRAMING PROBLEMS in TIMES of AMBIGUITY

'NEW FUTURES LAB' TRANSFORMING BIZ for SUSTAINABLE FUTURES



a 'SKUNKWORKS' for the ORG - REPORTS to CEO

FUTURE VISION



BUILDING CAPACITY

HOW ARE WE ENSURING COMPOSTING & RECYCLING?

SUSTAINABILITY

the MAIN LENS for OUR "GUIDE for GOOD"

VISION & VALUES



NOT PACKAGING...
FOOD
MOBILITY
the SYSTEMS of TRANSPORT

NEW SYSTEMS

NEW BIZ MODELS

BUSINESSES are BUILT for the OUTCOMES THEY ACHIEVE

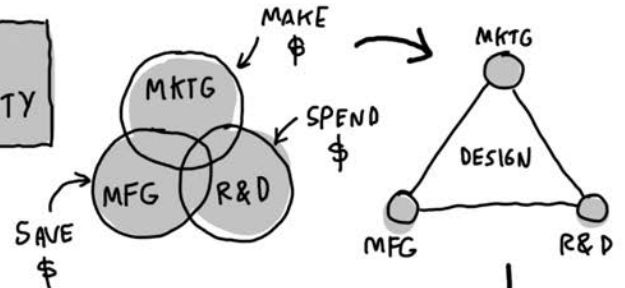


BREAKING PARADIGMS

FROM DESIGN CENTRICITY
to CIRCULAR DESIGN

DAVID DOMBROWSKI

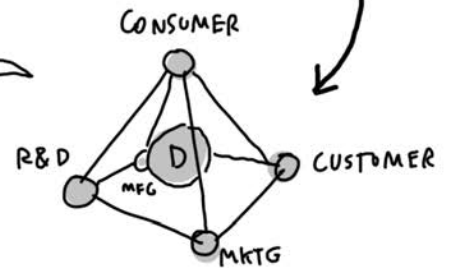
DESIGN
CENTRICITY



CONSUMER
JOURNEY

MOMENTS of
TRUTH in the
CHOPPER'S JOURNEY

HOW MIGHT YOUR
ORG BENEFIT FROM
a DESIGN-CENTRIC
WAY of THINKING?



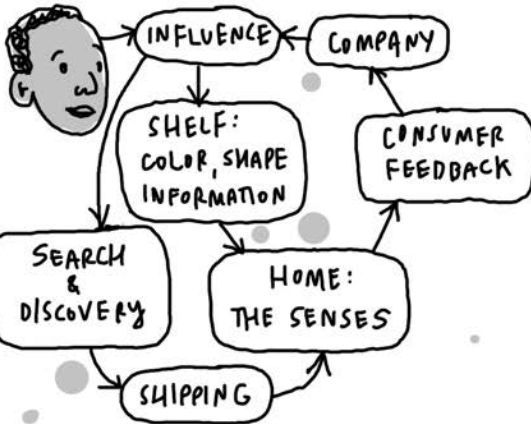
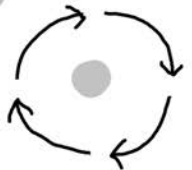
HOW MIGHT
YOUR ORG CONNECT
BETTER WITH the
CONSUMER + CUSTOMER?

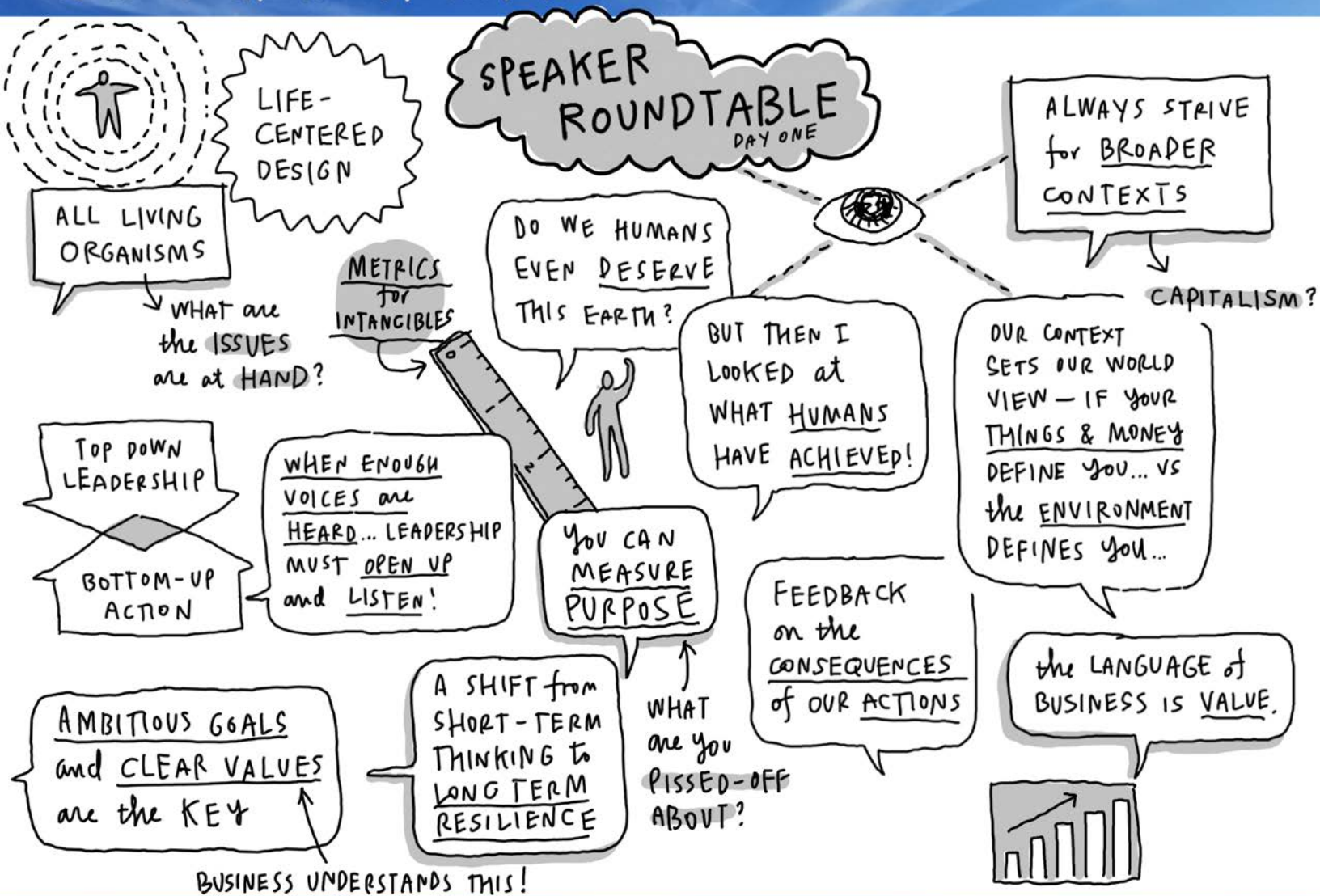
CIRCULAR
DESIGN

"CREATION
with INTENTION"

PRODUCTS
SERVICES
SYSTEMS

CREATE an
ECOSYSTEM
of VALUE





SPEAKER ROUNDTABLE

DAY TWO

FIND ALIGNMENT at the START for TRUE COLLABORATION

THERE IS NEVER A "PERFECT" SOLUTION



WHAT WILL HAVE the BIGGEST IMPACT?
CAN WE IDENTIFY the MOST PROBLEMATIC?

SHORT-TERM THINKING MAKES LONG-TERM RESULTS DIFFICULT

WHAT WASTE-STREAM MAKES the MOST SENSE for the CATEGORY?

the JOURNEY is the MOTIVATION TOWARDS IMPROVEMENT



THIS IS an OPEN-SOURCE ISSUE - WE MUST COLLABORATE

SEEKING the RIGHT INFORMATION

PAINT CAN BE REFRESHED - COATINGS ALLOW FOR FLEXIBILITY



REPAIR & RENEWAL ELIMINATES OWNERSHIP - KEEPS OBJECTS PERPETUALLY DESIRABLE

SUSTAINABILITY CAN CERTAINLY BE PROFITABLE!

CAN WE THINK ABOUT PRESERVING VALUE?

you NEED METALS

DURABILITY?

MODULARITY or RE-USE?

REVITALIZE, REDUCE, REUSE, RECYCLE

CAN WE FOCUS the CYCLE on LONGEVITY?

GARY
HUSTWIT

RAJA
SCHAAR

KEVIN
BETHUNE

MICHAEL
HILLMAN

CHUCK
PELLEY

ROUND TABLE: SUSTAINABLE TRANSPORTATION DESIGN

ELECTRIC VEHICLES:
ENVIRO. NEED, DESIRE
and MONEY



MOBILITY IS TRULY
ABOUT MOVING PEOPLE
AROUND - THE IMPACT
of AUTO-CENTRIC
TRANSPORT HAS MASSIVELY
IMPACTED THE CURRENT STATE

the
DEMOCRATIZATION
of TRANSPORT
PROVIDES NEW
OPPORTUNITY

EACH ELEMENT of
the ECOSYSTEM IS
AFFECTED BY CHANGE

WE NEED to
CREATE NEW
AVENUES of UTILITY -
MORE THAN SOLVING
SMALL THINGS

HOW CAN WE
TELL MORE
STORIES in
the SYSTEM?

TWO TRENDS - CITIES
ARE CHANGING
AWAY from CAR-
CENTRIC & COULD
IS MINIMISING
MASS TRANSIT



PEOPLE are STARTING
to SEE the SCOOTERS
as a PART of the
FABRIC of the CITY



TRANSPORTATION EQUITY
MEANS CONSIDERING
ACCESSIBILITY for ALL -
as WELL as URBAN
PLANNING

BRING
the PROTOTYPES
to the COMMUNITIES!



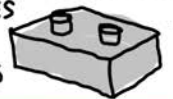
WE NEED to
KEEP the
MOMENTUM!

HEIGHTENED AWARENESS
of the TRUTH from
COMPANIES...

WE NEED
MORE STORIES
to MAKE IT ALL LESS ABSTRACT!

HOW CAN
WE BETTER
SHOW DESIGN
for SUSTAINABILITY?

BATTERIES
POSE
CHALLENGES



LOW
GAS PRICES
MAY SLOW
ALTERNATIVES...

WE'RE in a TIME
to RESET VALUES -
PERSONAL to SOCIETAL!

A TIME to
RE-INVENT!

"A JOINING of
HANDS JUST BY
LOOKING and
LISTENING to
EACH OTHER"



WE NEED to
SUPPORT EACH
OTHER MORE
NOW THAN EVER



MORE NOW THAN
EVER - WE NEED
DIVERGENT
PERSPECTIVES in
COLLABORATION

DESIGN MUST FACILITATE
CHANGE and BRING a
VOICE to the UNHEARD



A TIME for MORE
OBSERVATION and
REIMAGINATION

IT'S OUR OBLIGATION
to BE OPTIMISTS

BEING at HOME
HAS MEANT BEING
STUCK with OUR
STUFF... and
RETHINKING OUR
RELATIONSHIPS...

How Do You FOSTER
STUDIO COLLABORATION
REMOTELY?



RE-DEFINING WHAT
'FACE-TO-FACE' MEANS



A GLOBAL
SHARING of
THIS MOMENT

the GOOD
and the
BAD and
the UGLY

GATHERING
of PEOPLE -
GATHERING
of IDEAS!

Welcome!

CORONA VIRUS
HAS PAUSED
the WORLD...



STEPHAN
CLAMBANEVA

LET'S TAKE
an 'DATH' to
SUSTAINABILITY!

A CONFERENCE IS
JUST the START...



DEBERA
JOHNSON

TAKING
SUSTAINABILITY
from CHAOS
↓
COMPLEXITY
↓
CURIOSITY



A PROJECT
to BUY NO
CLOTHES for
ONE YEAR

Let's
Start!

DAY ONE	DAY TWO	DAY THREE
SUSTAINABLE STRATEGIES	PROCESS MATERIALITY GUIDES	PRODUCT STRATEGY



GRANT GOLDNER

TARFORM ELECTRIC MOTORCYCLES

SUSTAINABLE MATERIALS & CIRCULAR SYSTEMS

PRESERVE the
BEAUTY & UTILITY
of NATURE

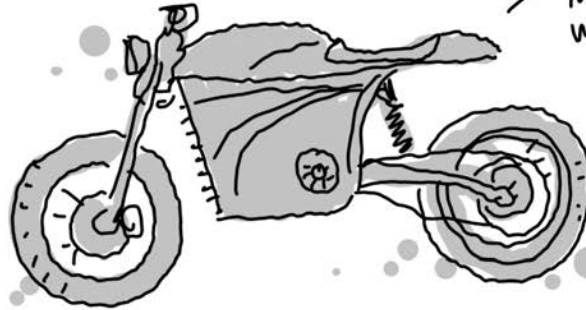
A NEW BREED of
MOTORCYCLES THAT
RESPECTS NATURE.

BETTER GAS
CONSUMPTION

LIGHTER
MEANS LESS
WEIGHT

COMPOSITES
ENABLE THIS

BUT ARE VERY HARD
to RECYCLE



COMPOSITE
BODY PANELS

+

U.V.
PROTECTION

MICRO-ORGANISM
PIGMENTS

+

NATURAL FIBER
REINFORCEMENT

START-UPS
CAN MAKE
THIS CORE

LARGE
COMPANIES
HAVE RESOURCES

WITHOUT a
SYSTEM,
MATERIALS
DON'T MATTER

LOGISTICS
MATTER

PRODUCER/
CONSUMER
RELATIONSHIPS
MATTER

WE CAN'T
EXPECT OUR
BUYERS to
BURY a BIKE!

A TREE IS
BIODEGRADABLE,
BUT IT TAKES
DECADES

BIOLOGICAL
LOOP

TECHNICAL
LOOP

INFINITE RECYCLING

CHEMICAL RECYCLING

A LAST RESORT
DUE to ENERGY!

REMOVE the
NATURAL FIBER
from COMPOSITE
and RE-USE

the
ENLIGHTENED
INDUSTRIAL
DESIGNER
HYLNUR ATLASON

IDEAS-EXECUTED
POORLY - LEAD
to MASSIVE WASTE

ETERNAL
IMPACT

A FEW
SECONDS
of USE

IS DESIGN a
FORCE for GOOD?
OR a WASTE-
MAKING MACHINE?

EXTRACTION PRODUCTION SHIPPING

HOW DO YOU
INTEGRATE
SUSTAINABLE
THINKING into
DESIGN CONSULTING?

WE KNOW
the IMPACT

WE KNOW
the STRATEGIES

BUT are WE
HAVING IMPACT?

DESIGNERS
NEED to
BROADEN OUR
SCOPE to MAKE
REAL IMPACT!

CENTRAL
to OUR
PROCESS

COMMUNICATE
to CLIENTS -
MOTIVATE THEM

ENGAGING
the
COMMUNITY

WEB
RESOURCE

NEWS-
LETTER

THE SILL
PEOPLE
LOVE
PLANTS

NOT ALWAYS
GRANOLA

DIRECT to
CONSUMER

AUDIT of
the PROCESS

CHALLENGE
the AESTHETIC

RETHINK
PACKAGING

MFG
PLANNING

PIVOT
CHANGE
DISRUPT

the
ENLIGHTENED
CLIENT

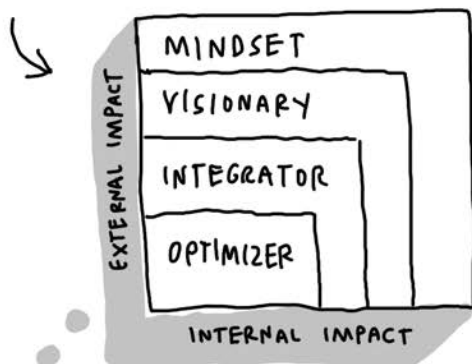




DESIGN for HUMANITY

JAY PETERS, GROW

the 4 HORIZONS of DESIGN for HUMANITY



THE SOLE MEANING of LIFE IS to SERVE HUMANITY

-TOLSTOY

WE MUST EVOLVE BUSINESS

HUMAN CENTERED DESIGN

HUMANITY-CENTERED DESIGN



DESIGN LEADERSHIP

PURPOSE-DRIVEN

	MOTIVATION (WHY?)	RESPONSIBILITY (WHO?)	APPROACH (WHAT?)
④	EXTERNAL BENEFIT	COMMUNITY	CONSEQUENCE
③			
②	↕	↕	↕
①	INTERNAL	INDIVIDUALS	OUTPUT

the
GOOD FUTURE
DESIGN ALLIANCE
KATIE STOREY

A NEW RADICAL
PATH FORWARD
for DESIGN/BUILD

REDUCING
WASTE by
50%
By 2025

500 MILLION
TONS ANNUALLY

12.2 MIL TONS
of FURNITURE

30% of SF LANDFILL
IS CONSTRUCTION WASTE

MANUFACTURERS
MUST STEP UP

HOW CAN
WE PARTNER
with the MAKERS?

WE CAN
NO LONGER
IGNORE OUR
IMPACT on the
ENVIRONMENT or
OUR COMMUNITIES

↑ WHAT if the ENTIRE
INTERIORS
INDUSTRY ALL
AIMED for THIS?

AN ALLIANCE of
DESIGN/BUILD FIRMS
to MAKE a
COMMITMENT, GET
RESOURCES, DRIVE IMPACT

AND PRODUCT
MAKERS!

JOIN
US!

MAKE
BETTER

BUY
LESS

PART-
NERSHIPS



INTENTIONAL DISCONTINUITY

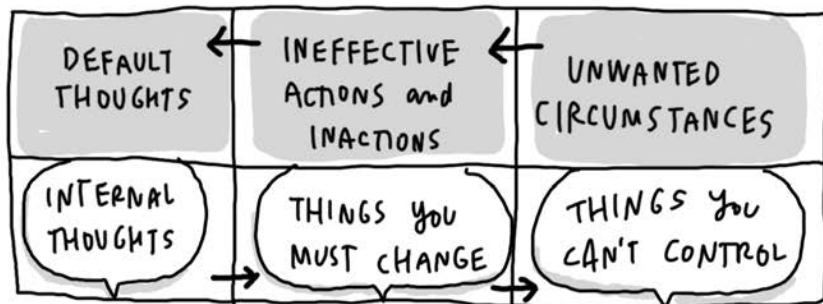
KEVIN GANGEL

UNSTOPPABLE CONVERSATIONS

BUSTING PARADIGMS

TRANSFORMATIVE CHANGE

PHENOMENOLOGY



CONTEXT for TRANSFORMATION



WE LOOK for TRANSFORMATION in the WRONG PLACE

INFORMATION?



HEALTH IDEAS

EXPERIENCE?



RIDING a BIKE

CONTEXT?



your WORLD-VIEW

ORDINARY LEADERS

VS

UNSTOPPABLE LEADERS

OPTIMIZATION OVER TIME

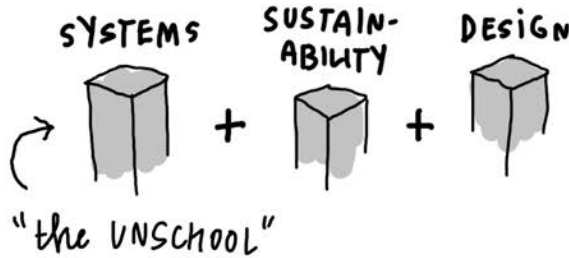
ACCELERATING CONTEXTUAL SHIFTS

SHUT UP and LISTEN!



DR. LEYLA ACAR OGLU
DISRUPT DESIGN

DESIGNING
SYSTEMS
CHANGE



Love
Complex
Problems

SHIFT
PERSPECTIVES



the ANATOMY
of ACTION

UN. SOCIAL MEDIA
CAMPAIGN



the CIRCULAR
CLASSROOM

DESIGN EDUCATION
for STUDENTS

HUMANS HAVE
CREATED LINEAR
SYSTEMS - NATURE
USES REGENERATIVE
SYSTEMS

the DISRUPTIVE
DESIGN
SYSTEM

MINING
↓
LANDSCAPING

BUILDING

the ANTHROPOCENE:
the GEOLOGICAL TIME
in WHICH HUMANS
HAVE IMPACTED EARTH

WHAT CAN
WE DO ABOUT
THIS?

EARTH
OVERSHOOT
DAY IS COMING...

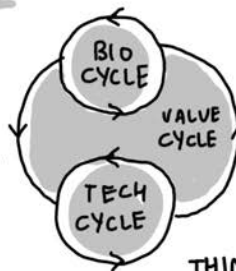


CHANGE IS
IMPERATIVE

...DESIGNERS
HAVE the
TOOLS for CHANGE

CULTURAL
CHANGE
REQUIRES
CREATING
NEW VALUE

VALUE



RECYCLING
VALIDATES
WASTE - IT
COGNITIVELY
JUSTIFIES WASTE

THERE'S NO SUCH
THING AS WASTE in NATURE!

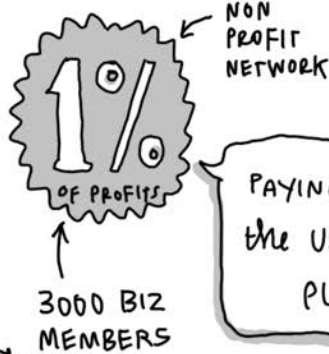


A COMMITMENT to TAKE ACTION TODAY

ENVIRONMENTAL EXTERNALITIES INTEGRATED into MARKET FACTORS

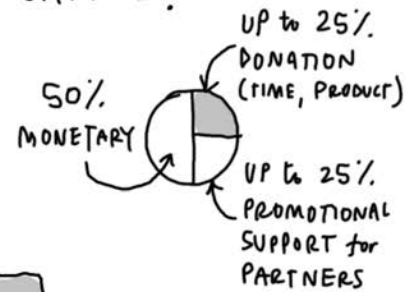
YVON + CRAIG
CHOUMARD MATTHEWS

STARTED in 2002
AS A PART of PATAGONIA



BUSINESSES CAN MAKE REAL CHANGE!

PAYING RENT for the USE of the PLANET



- ELEVATION of BRAND & PRODUCT
- COMMITMENT to VALUES
- POWER of COLLECTIVE ACTION

PARTNERSHIP ADVISING
DESIGNING a GIVING STRATEGY, SETTING GOALS

ANNUAL CERTIFICATION
VERIFICATION of COMMITMENT

POSITIVE FEEDBACK LOOP
AMPLIFY & INSPIRE OTHERS

SUNSKI
COMMIT to FUTURE ACTION

BOXED WATER
PLANTED 100 MILLION TREES

STASHER
COLLAB. WITH PLASTIC POLLUTION PARTNERS + DONATION

À PLAT
A BIGGER GOAL BEYOND SALES



JULIANNE TRUMMER



BLAKE MCELLOWNEY

the POWER of DESIGN to CREATE a BETTER FUTURE

MORMEDI



BUT THERE are LIMITS to GROWTH...

WHAT IS the ROLE of DESIGN in the FUTURE?

DESIGNERS:

- TACTICAL to STRATEGIC
- HUMANITIES to SCIENCE
- RESPONSIBILITY and POWER

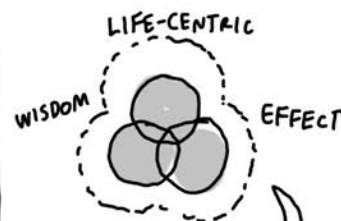
BUT ALWAYS in SERVICE of GROWTH

↑
WHAT IS the NEW WAY to MEASURE PROGRESS?

CAN WE SEEK a NEW BALANCE?

INFLUENCE HAS GROWN...
CRITICAL THINKING HAS NOT KEPT UP

CREATING a BROADER VISION?



USER-CENTERED DESIGN IS TOO SELFISH

EQUITABLE GENERATIONAL SUSTAINABLE

LEVERAGE OUR REACH

ANTICIPATE the FUTURE, FACILITATE CHANGE

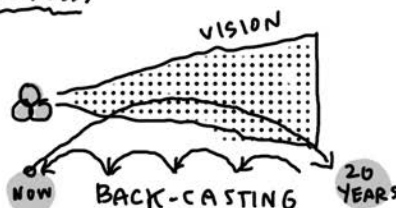
USE OUR LIFE FORCES

A RETURN TO

CREATIVITY
INSPIRATION
BEAUTY
REFLECTION

INNER CHILD
CLARITY
SIMPLICITY
HUMILITY

ANTICIPATE & VISUALIZE



SMART MOBILITY

FACILITATION of CHANGE HELP with DISCOMFORT

A FOCUS on the ENTIRE LIFECYCLE

A STRATEGIC SUSTAINABILITY MAP





NIKE SPACE HIPPIE OPTIMISTIC URGENCY

NOAH MURPHY-REINHERTZ, NIKE

"THERE IS NO
FINISH LINE"

WE NEEDED
STRUCTURED
COMMITMENTS

CARBON
WAS #1

BUT NEW
INNOVATIONS
TAKE TOO MUCH
TIME!

TECH
INNOVATION

CULTURAL
INNOVATION

**SPACE
HIPPIE**



FOAM
PATTERN
WASTE → RECYCLED
IN-SOLE

RUBBER
GRIND → CRATER
FOAM

TAKING THE
MELTING &
EXTRUDING
OUT...

EMBRACE
CONSTRAINTS

"TRANS-
FORMING
an ABUN-
DANT RESOURCE
into VALUE"

OUR TRASH
IS HIGH
PERFORMANCE

HOW CAN WE
AVOID USING
MORE ENERGY for
TRANSFORMATION?

RE-USE
of
MATERIALS

THERE'S
NO RESUPPLY
MISSION
COMING to
EARTH

IN-SITU
UTILIZATION

TEXTILE
WASTE → SPACE
WASTE
YARN



BIOMIMICRY, PRODUCT DESIGN and the CIRCULAR ECONOMY
 SETH GALEWYRICK
 BIOMIMICRY 3.8

WHAT IS YOUR INTENTION?

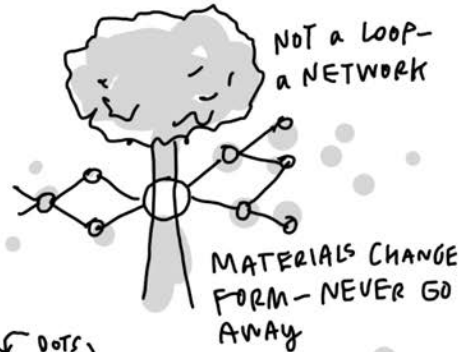
PROBABLY NOT TO MAKE TRASH...

the CIRCULAR ECONOMY is the WHAT... BUT HOW?

BIOMIMICRY
 the CONSCIOUS EMULATION of NATURE'S GENIUS

the PERFECT WAY to PRACTICE the CIRCULAR ECONOMY

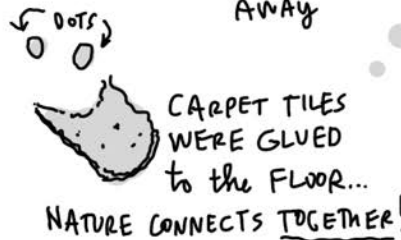
LIVING SYSTEMS TREND TOWARDS CIRCULAR



POLYMERS are NOT the PROBLEM

SYNTHETIC IS the PROBLEM

NATURAL COMPOSITION & STRUCTURE CAN PERFORM!



THE SYSTEM DOES NOT EXIST in ISOLATION

STORAGE BARREL BREAKS DOWN



MUST BE DESIGNED for ALL USERS

MUTUALLY BENEFICIAL RELATIONSHIPS in NATURE

AND SCALE REALLY MATTERS

CORPORATE COLLABORATIONS ARE KEY

MUTUAL BENEFIT
 FEED BACK LOOP
 EASY to DO, NOT STATIC

MATCH the CONTEXT to the CHALLENGE



BEHIND the BIKE

STEFAN YTTERBORN
CAKE ELECTRIC MOTORCYCLES

WHEN I REALIZED
I WAS NO DIFFERENT
THAN ANYONE ELSE...
I REALIZED HOW DESIGN
COULD IMPACT PEOPLE

"the OBLIGATION
and the PROMISE"

"a PURPOSE
BEHIND the
BUSINESS"

IT'S LIKE
SKIING
WITHOUT
SLOPES!

SOLAR
CHARGE

SILENT

NO CLUTCH,
NO GEARS

WE DON'T SPEAK
ABOUT DESIGN at
CAKE - WE TALK
ABOUT VALVES &
AMBITIONS

"COLLECTIVE
RESPONSIB-
ILITY"

the PACE of
CONSUMPTION
SETS the
CONTEXT

"SEEKING
NEW
PERSPECTIVES
and
INSPIRATION"

INCLUSIVE
THROUGH ITS
SIMPLICITY

COMMITTING
to LONG-TERM
ENDURANCE

PERFORMANCE
DELIVERED by
STYLE - NOT
JUST STYLING

"PROMOTE
PATIENCE"

SUSTAINABILITY
IS a PROCESS -
WE NEED to
INSPIRE PEOPLE

NOT A
SHORT-
TERM
PROCESS!

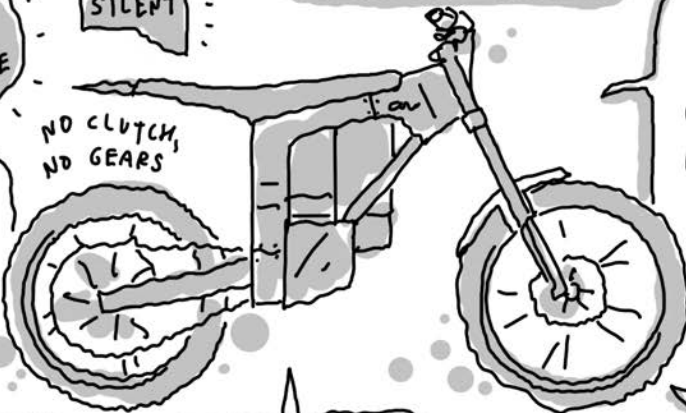
RESOURCE
INTENSIVE,
BUT LASTING

PREMIUM
VS
LUXURY

BRINGS INNOVATION,
PERFORMANCE

the
POWER
of
FRESH
EYES!

PROPOSING
ALTERNATIVES for
TRANSPORTATION





INTERCONNECTED SUSTAINABILITY

TUCKER VIEMEISTER

MY JOB IS TO TURN SPINACH INTO CANDY*

THERE ARE FEW PROFESSIONS MORE HARMFUL THAN I.D.

V. PAPANEK

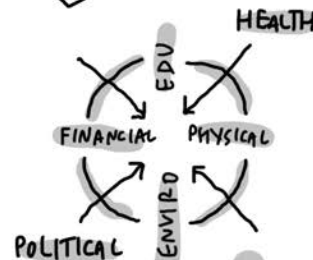
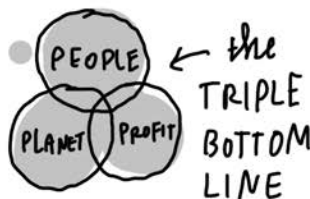
BUT THE WORLD IS CHANGING FAST...

LET'S KEEP THE MASS IMPACT - BUT ELIMINATE THE NEGATIVE

MASS PRODUCTION IS STILL IMPORTANT

"BE ASHAMED TO DIE UNTIL YOU HAVE WON SOME VICTORY FOR HUMANITY"

-HORACE MANN



CAN WE GET SMALL? NANO?

NUMBERS?

SIZE?

INTELLIGENCE?

WE NEED BIG SOLUTIONS!

CAN WE DECYCLE CARBON?

RECYCLE?
UPCYCLE?
DECYCLE?

WHAT ABOUT MICRO ENERGY?

FUTURE LIFE EXHIBITION