



DESIGN DRIVEN INNOVATION TOWARDS THE GREEN SHIFT

HFC Forum – 20.10.2021

EGOS

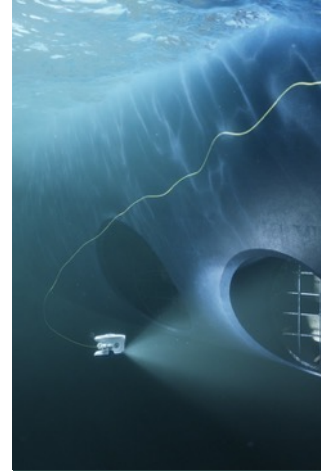
OCEAN,
OFFSHORE & SUBSEA
DESIGN & INNOVATION



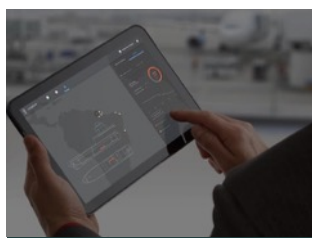
COGNITE



OKEA



ExxonMobil



KONGSBERG



AkerBP



AUTRONICA
FIRE AND SECURITY



OCEANEERING



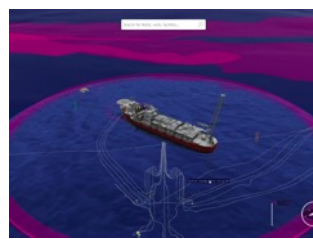
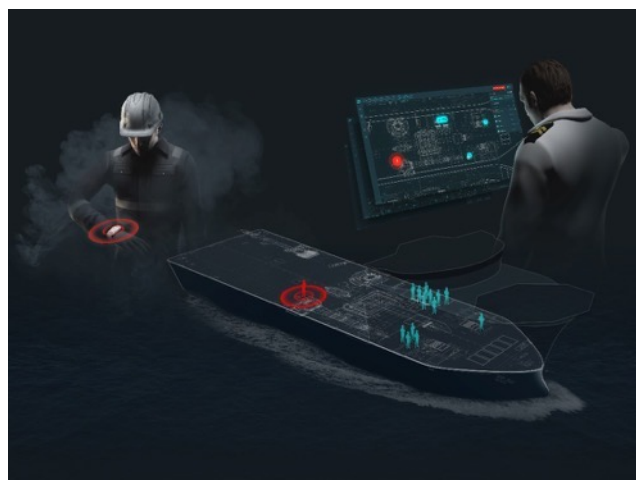
TechnipFMC



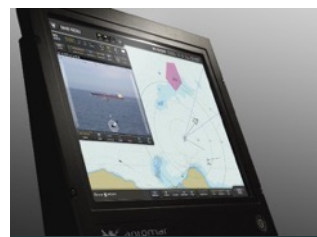
blueye



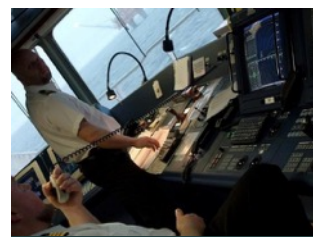
**MAERSK
TANKERS**



**ALFA
LAVAL**



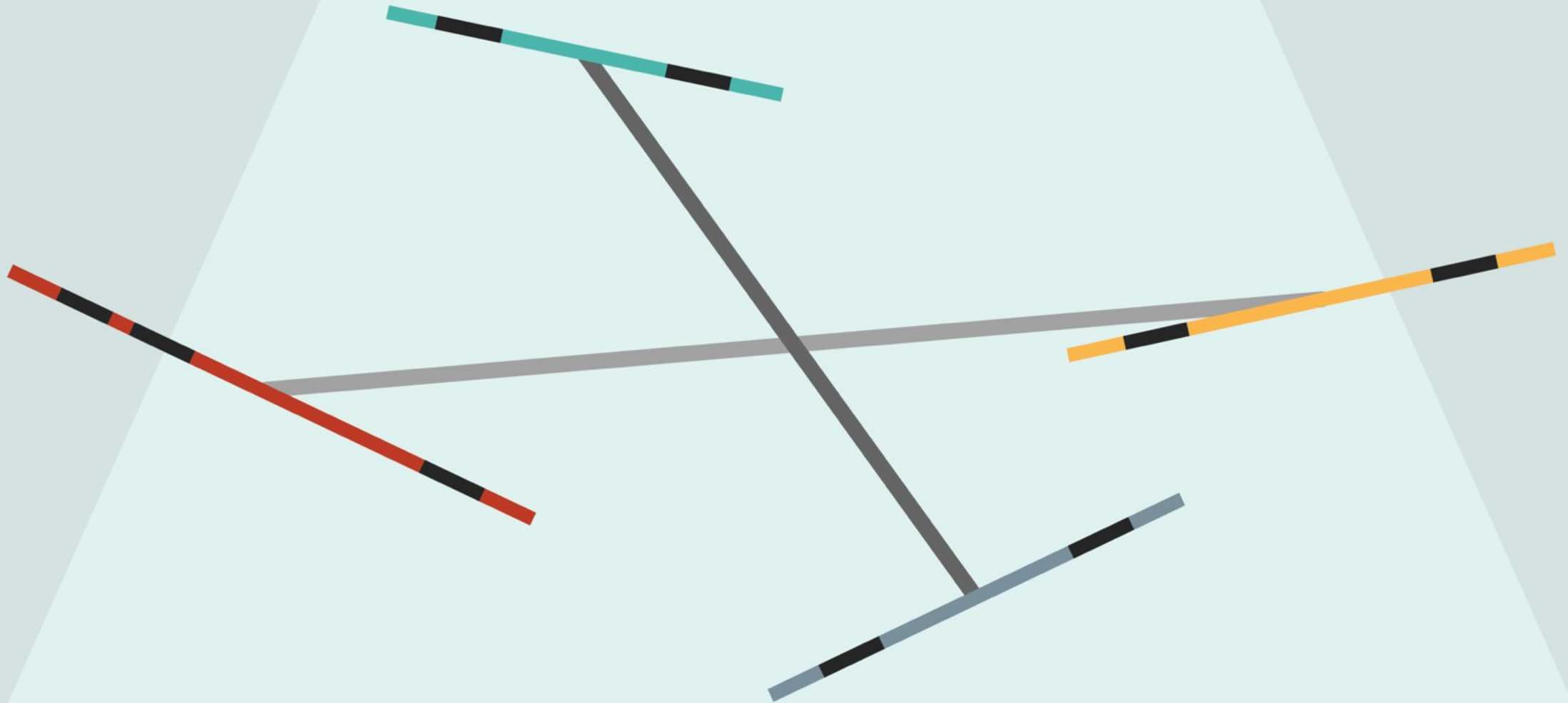
NOV



DNV-GL











PEOPLE-CENTRIC STRATEGY

YOUR MARKET

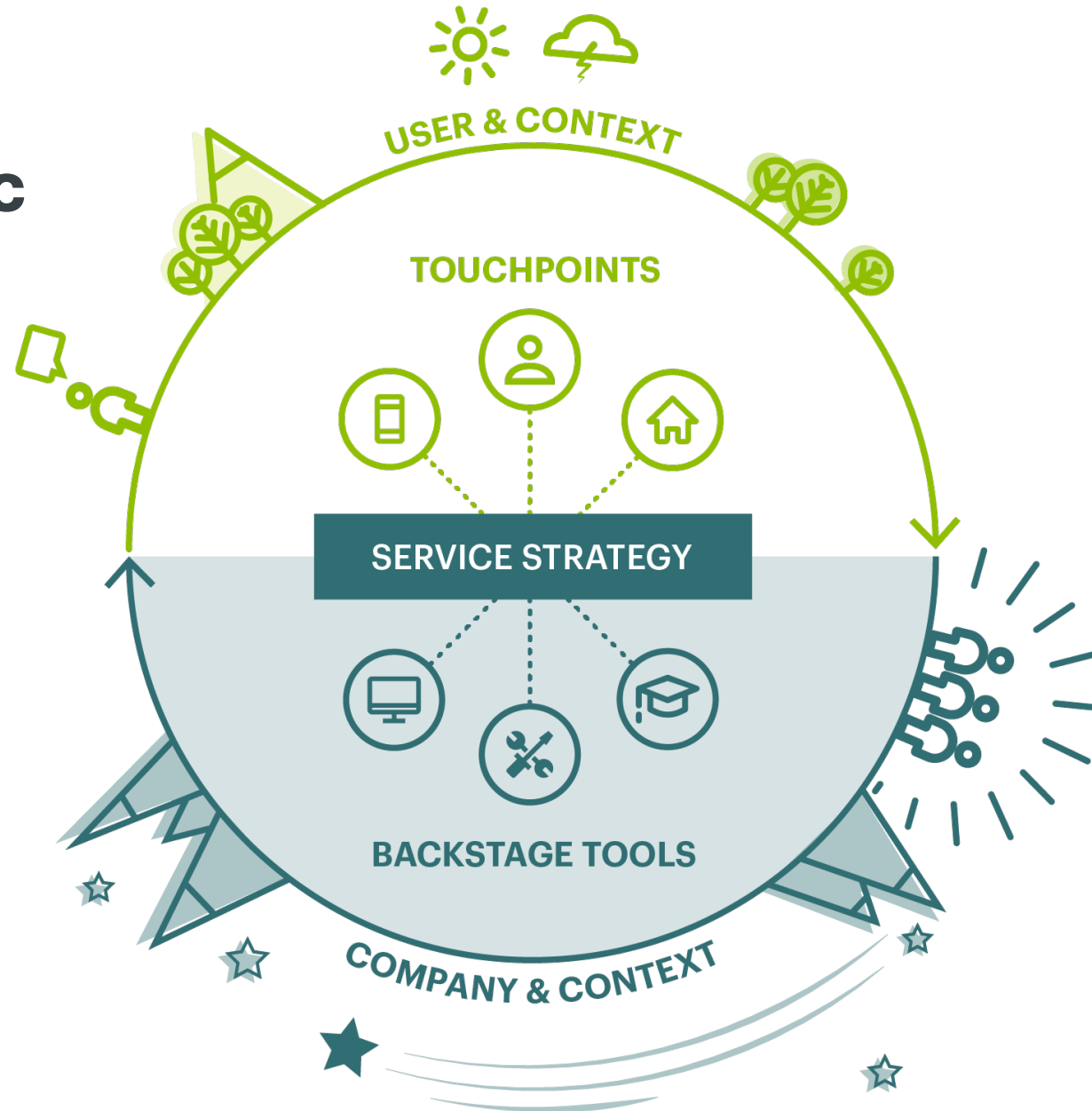
YOUR SERVICE STRATEGY

YOUR ORGANIZATION





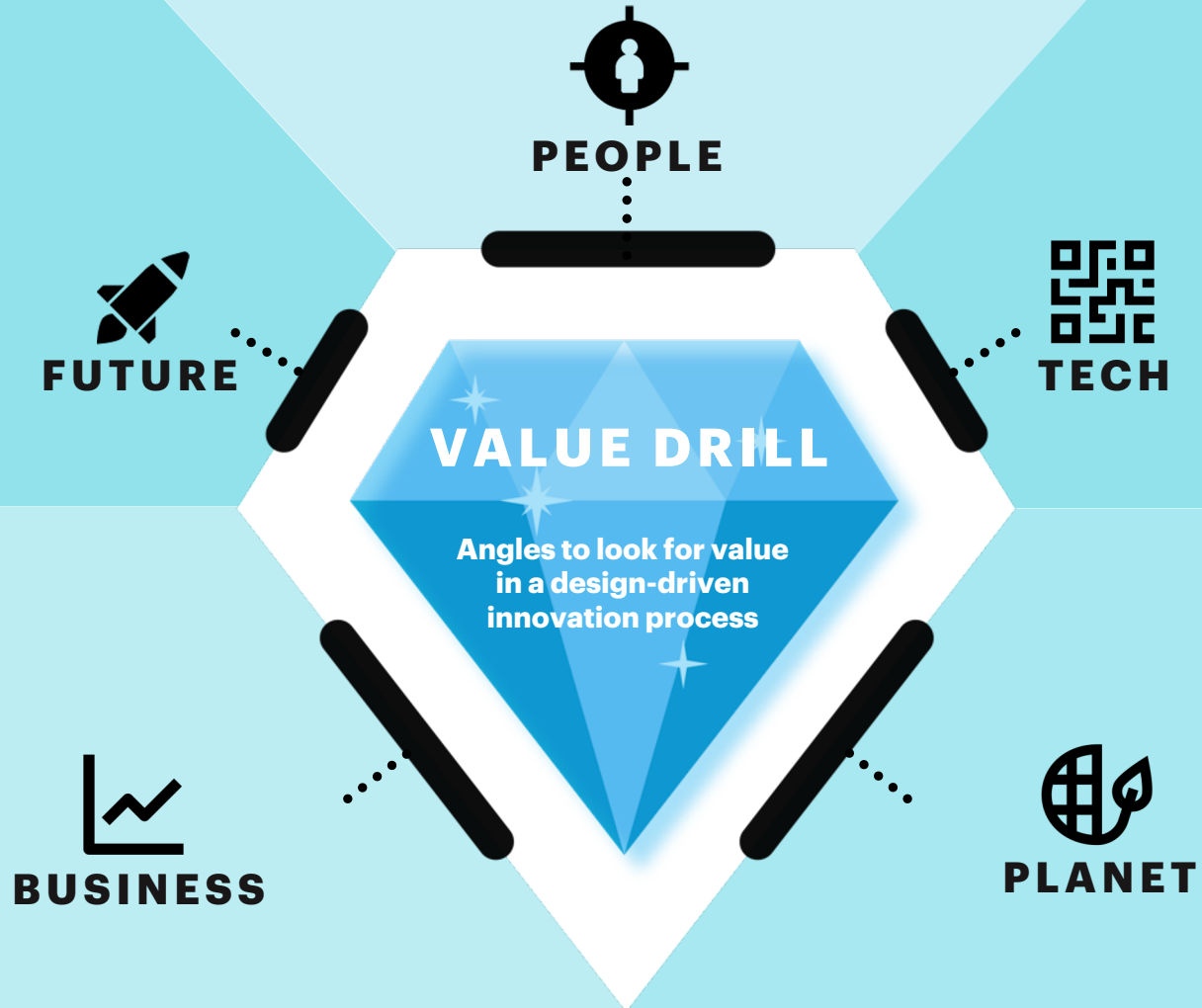
PEOPLE-CENTRIC STRATEGY



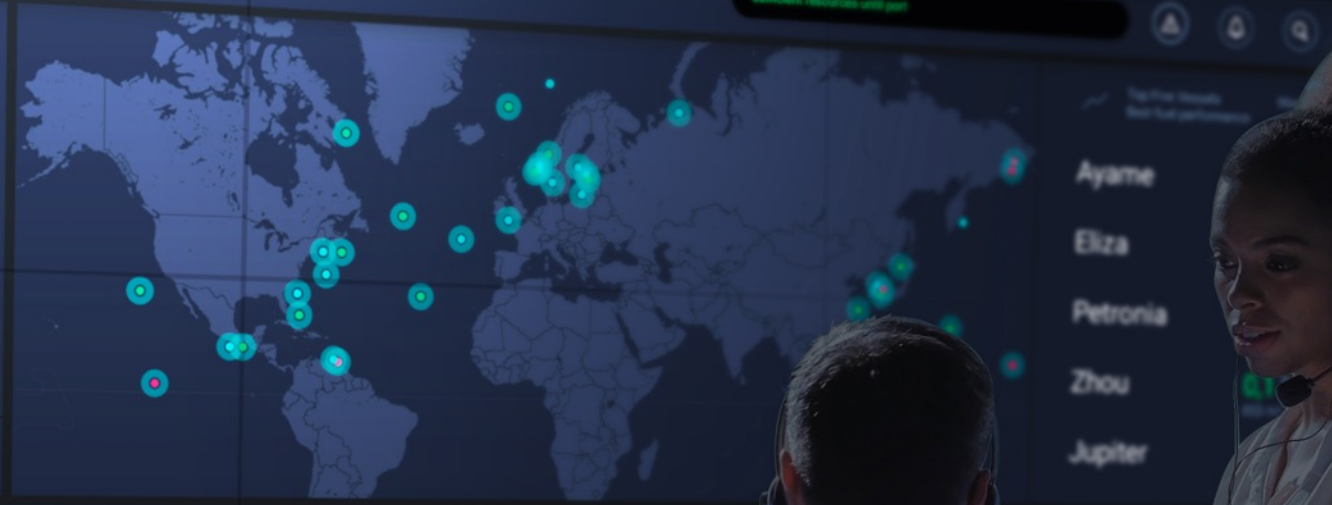
**YES YES,
BUT WHAT ABOUT
THE GREEN SHIFT???**



SEVERAL VALUE ANGLES CAN CREATE PROFITABLE AND SUSTAINABLE INNOVATION



Sufficient resources until port



- Ayame
- Eliza
- Petronia
- Zhou
- Jupiter

Avg. CO2
551.4 g/kWh -8.5%

Avg. NOx
9.3 g/kWh -0.3%



Fuel Consumption Per Month



CO2
14,2 t/hr +0.2%

NOx
14,2 t/hr +6.3%



2025

EMS CASE WITH COMPANIES IN PORT
The industry to
into the Port EMS
and gas as a case



DIGITAL INFRASTRUCTURE EXPANDED TO OTHER INDUSTRIES
Taking into consideration other industry needs



PHYSICAL INFRASTRUCTURE EXPANDED TO INCLUDE OTHER INDUSTRIES
Taking into consideration industry needs for example:

- Electrification of machinery
- Energy efficiency and use of smarter and more sustainable architecture
- Behavioural needs, such as using the different systems

PORT ESBJERG

Future vision for environmentally optimized Port

INSIGHT, SERVICE DESIGN, SYSTEM DESIGN, SUSTAINABILITY

LOADING
The service and
structure
based on
for upscaling



SIGN THE PLEDGE
Joint agreement to reduce CO2 footprint

UNDERSTAND NEEDS OF THE INDUSTRY
For the EMS and for physical infrastructure e.g. electric charging infrastructure

RENEWABLE FUELS

Renewable fuels are tested as a green fuel alternative to oil for the ships operating from the port. This leads to a major decrease in CO2 emission and air pollution.



SOLAR PANELS

Individual companies expand their use of solar panels, making use of available roof space



SMART LOGISTICS

The establishment of smart warehouse, smart lighting and smart heating leads to energy optimisation and decarbonisation of the logistic chain.



ENERGY MANAGEMENT

Port Esbjerg collects and shares data from all actors within the port, allowing for optimisation of workflow and energy use (decarbonisation management) leading to cost savings and lower greenhouse emissions (Port 4.0).

SHORE POWER:

With shore power systems the vessels have access to green electricity produced at "Horns Rev 2". This has lowered the emission of green house gases by more than 41%.

VESSEL OWNERS

Oil and Gas vessel owners to use shore power

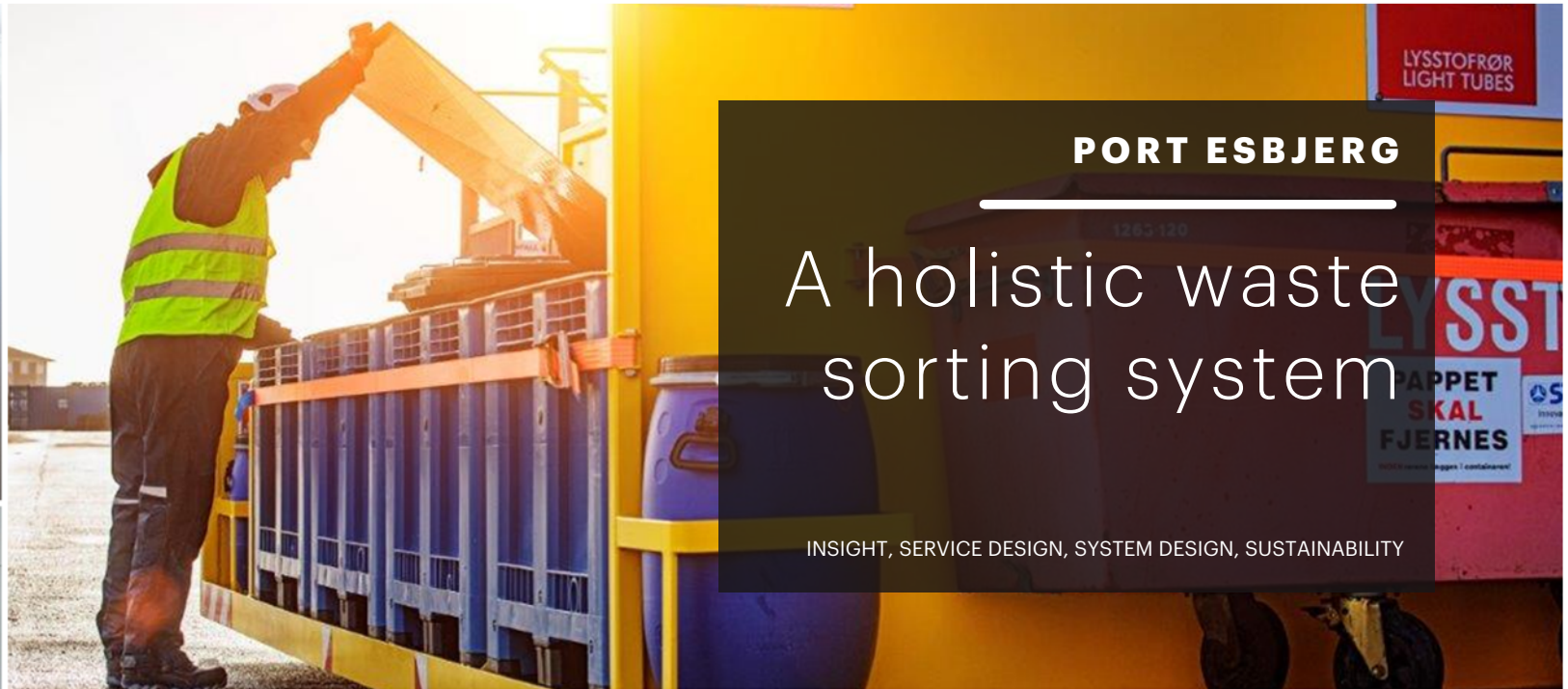
DECOMMISSIONING TURBINES

With Port Esbjerg's expertise in decommissioning turbine components, digitalisation and bringing operators together, the port becomes a hub for decommissioning of offshore wind turbines.





EG
CS



PORT ESBJERG

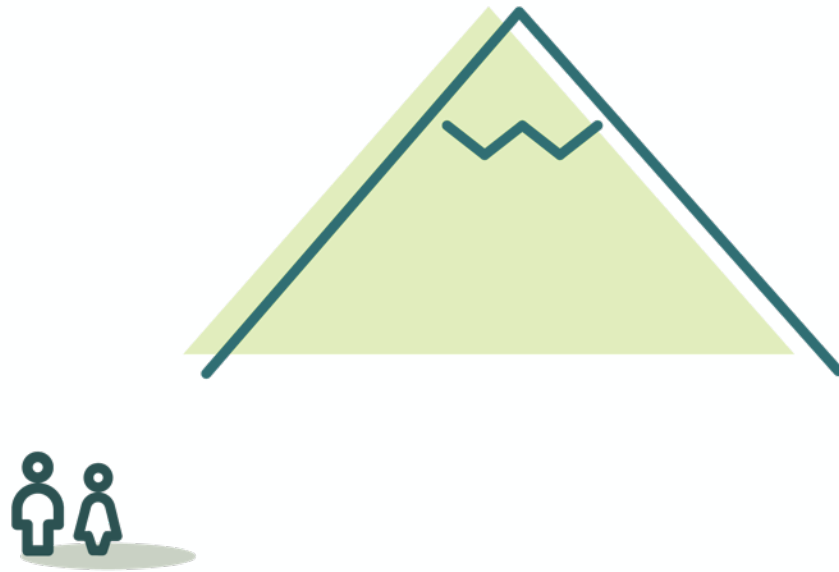
A holistic waste sorting system

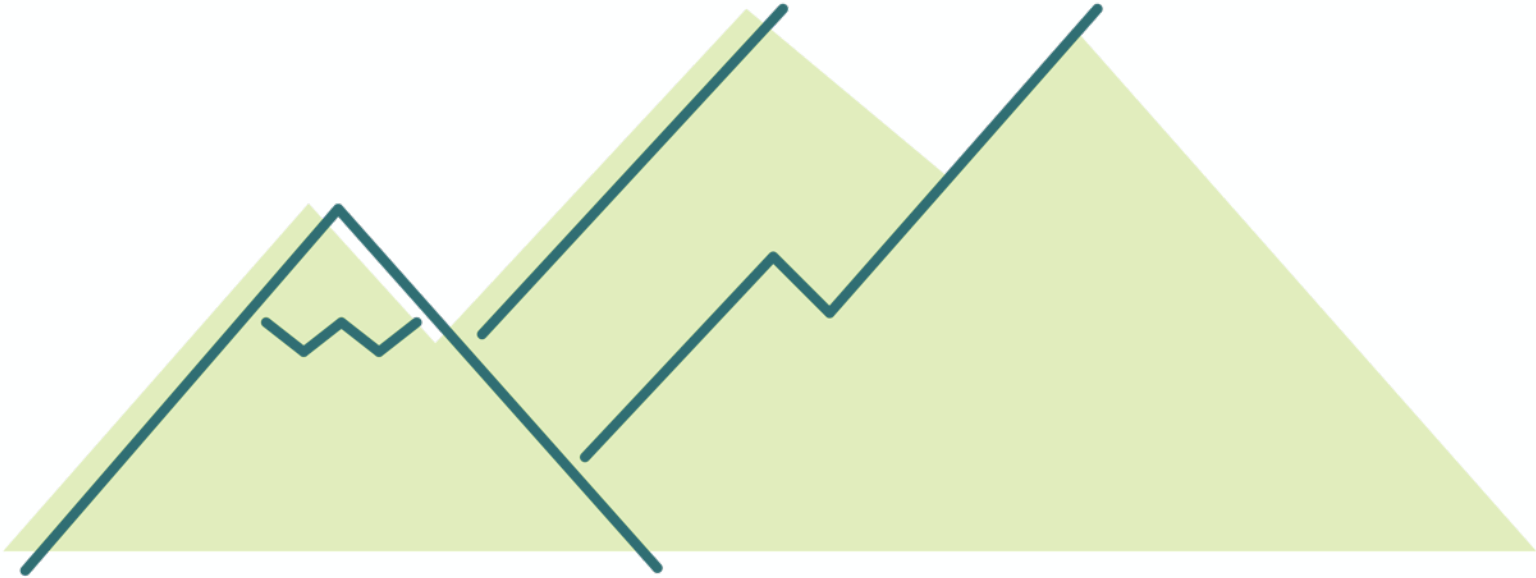
INSIGHT, SERVICE DESIGN, SYSTEM DESIGN, SUSTAINABILITY





**SO MANY WAVES...
...WHICH ONE IS YOUR BEST SHOT?**





TECHNOLOGY AS DESIGN MATERIAL



**AUGMENTED
REALITY**



**VIRUTAL
REALITY**



**ARTIFICIAL
INTELLIGENCE**

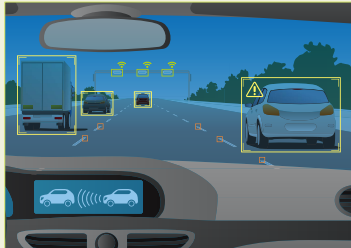


**MACHINE
LEARNING**



IOT

THE FUTURE AS DESIGN MATERIAL



Technological advances

IT everywhere
Robotics
Advanced materials
Biotech



Demographics

Urbanisation
Population growth
People get older
Family structure is changing



Polarisation

Increasing gap between the have's and have not's
More extremism in European politics
Urbanization overrules rural
Fit vs. fat



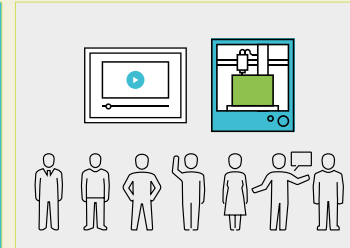
Economic growth

Economy is growing steadily
Crisis in 2016 evens out in the long term
Asia is biggest
More people have basic needs covered
Unknown consequences of mobility



Globalisation

The world becomes mixed up
Service providers can serve the whole world
New concepts come from everywhere
Telepresence



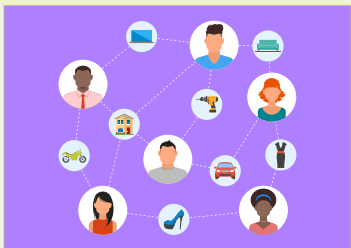
Democratisation

Power is decentralised
From nations to organisations
Makers - people make their own products
DIY automatism (be your own journalist)



Complexity & Acceleration

Competitors catch up faster
Technology is adapted faster
Things get smaller, faster, cheaper
The fast beat the slow



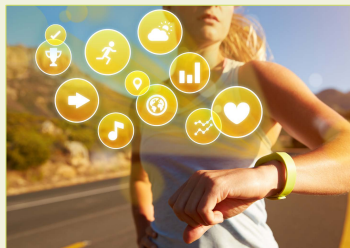
Network Society

Sharing economy
Crowdfunding
Trust people you dont know
Everyone can buy from everyone



Individualisation

Self realisation in all life phases (including elderly)
Everything adapts to me:
Do it yourself / Maker culture
Customised products
Customised medicine (DNA)



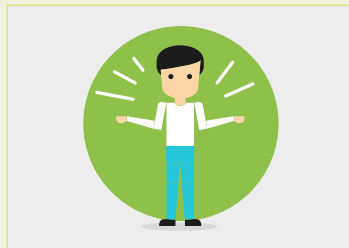
Focus on Health

Do it yourself - health
We look at our health through technology
From treatment to prevention
Patient powered networks



Sustainability

Smart society (houses, cities)
The green switch ("Greenovation")
Consumers care, given economic growth
Flash consumption - buy green to show off



Immaterialisation

From product to service
Ownership less important
People buy stories and experiences
People wish to take active part in services

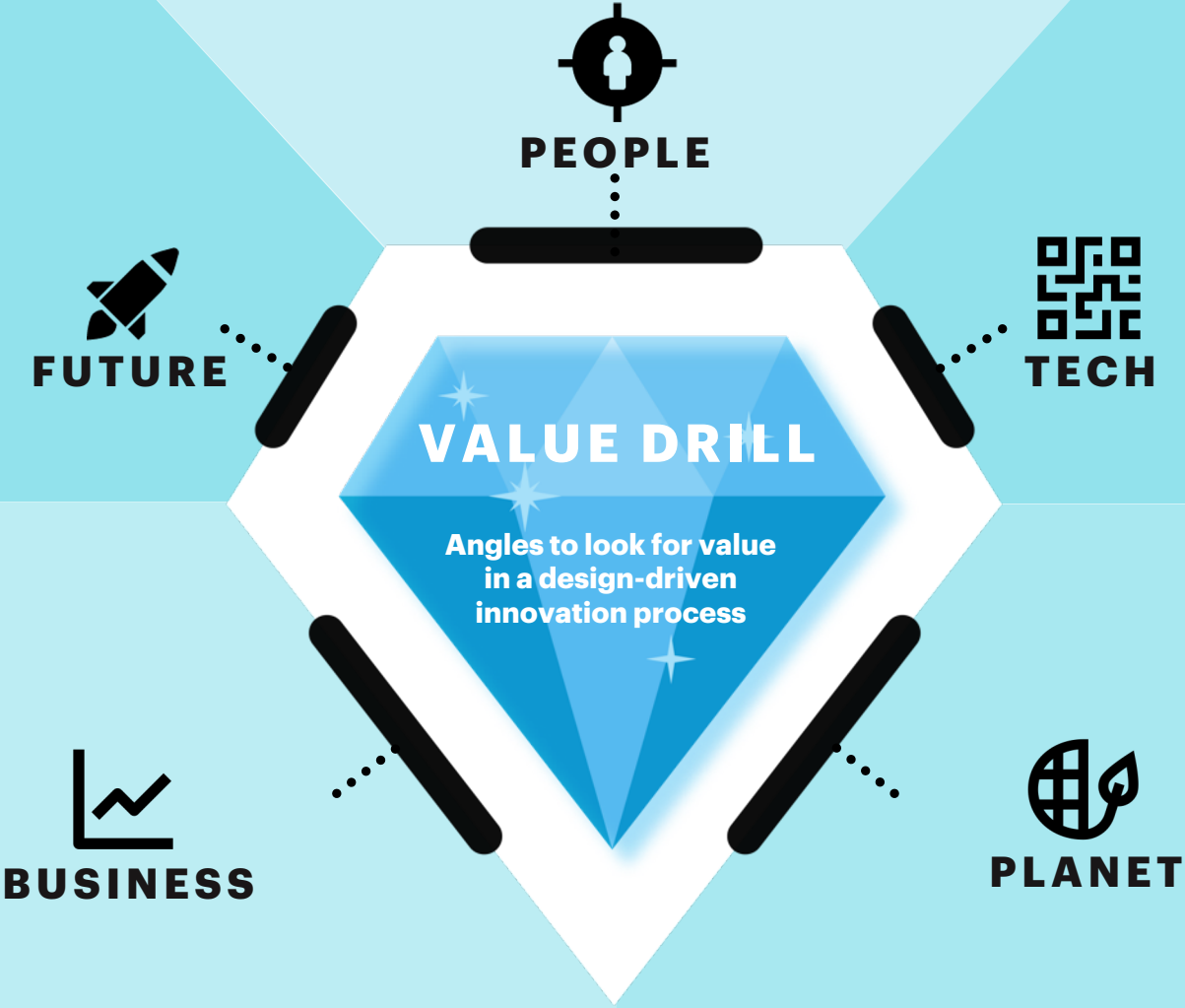


Knowledge explosion

Information doubles every year
"Big data"
Consumer data accumulated for research & advertisement
Market for reduction of complexity

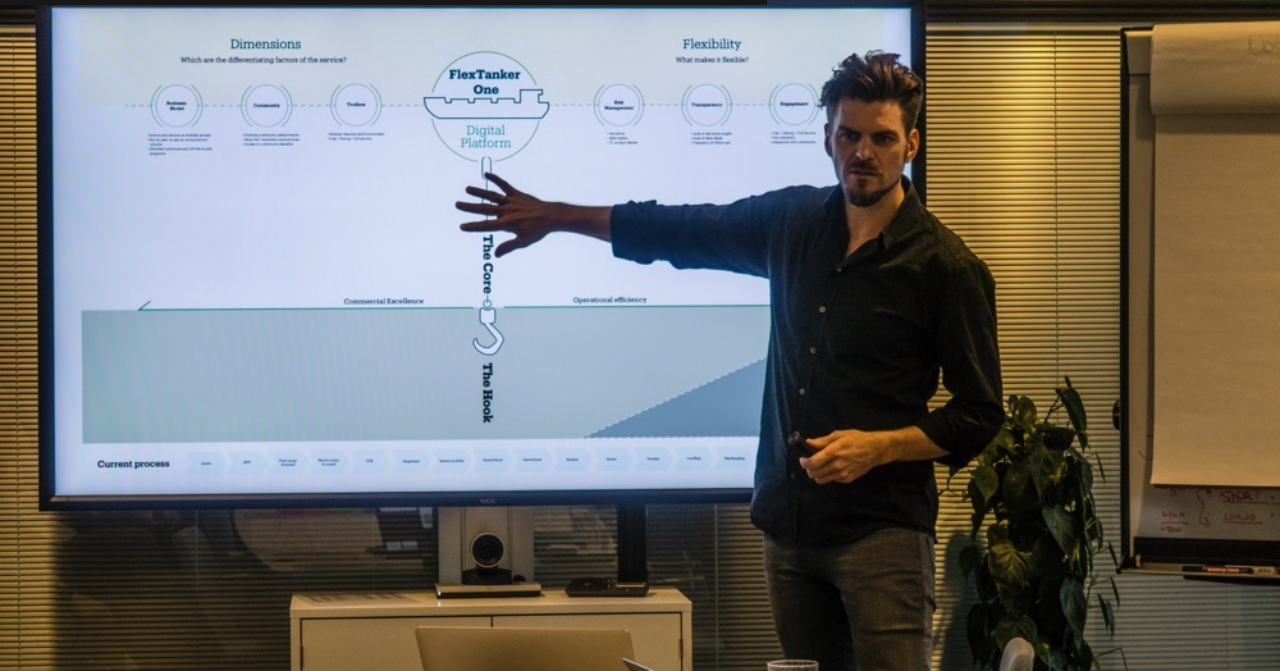
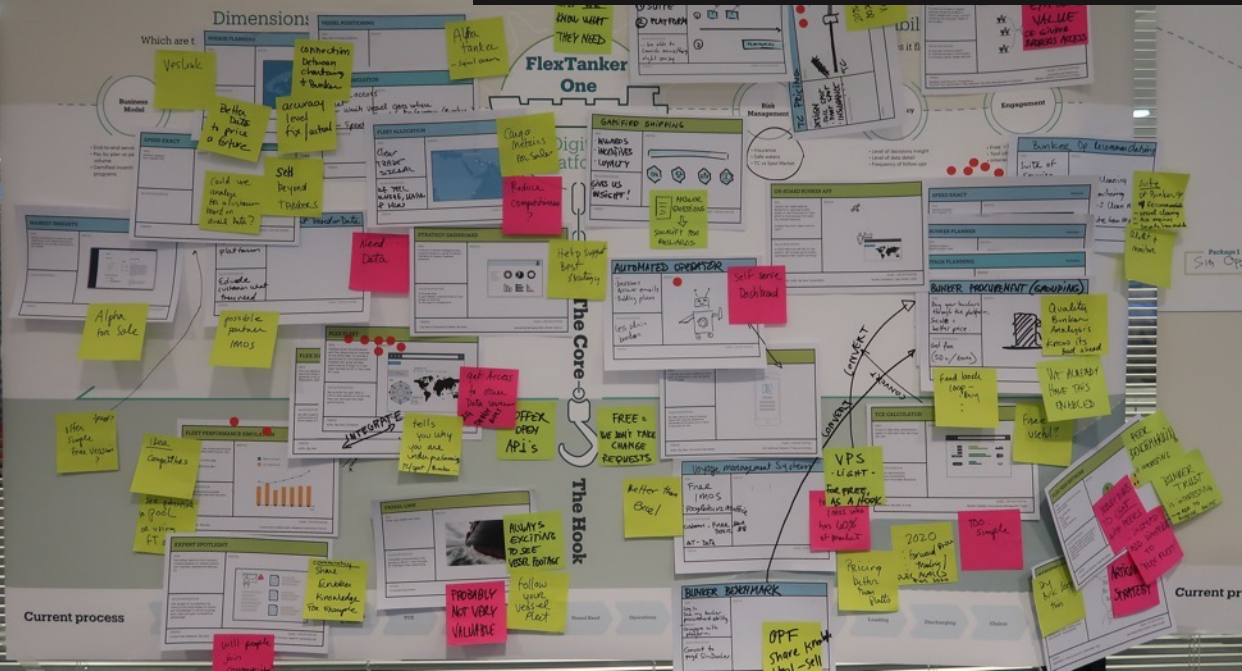


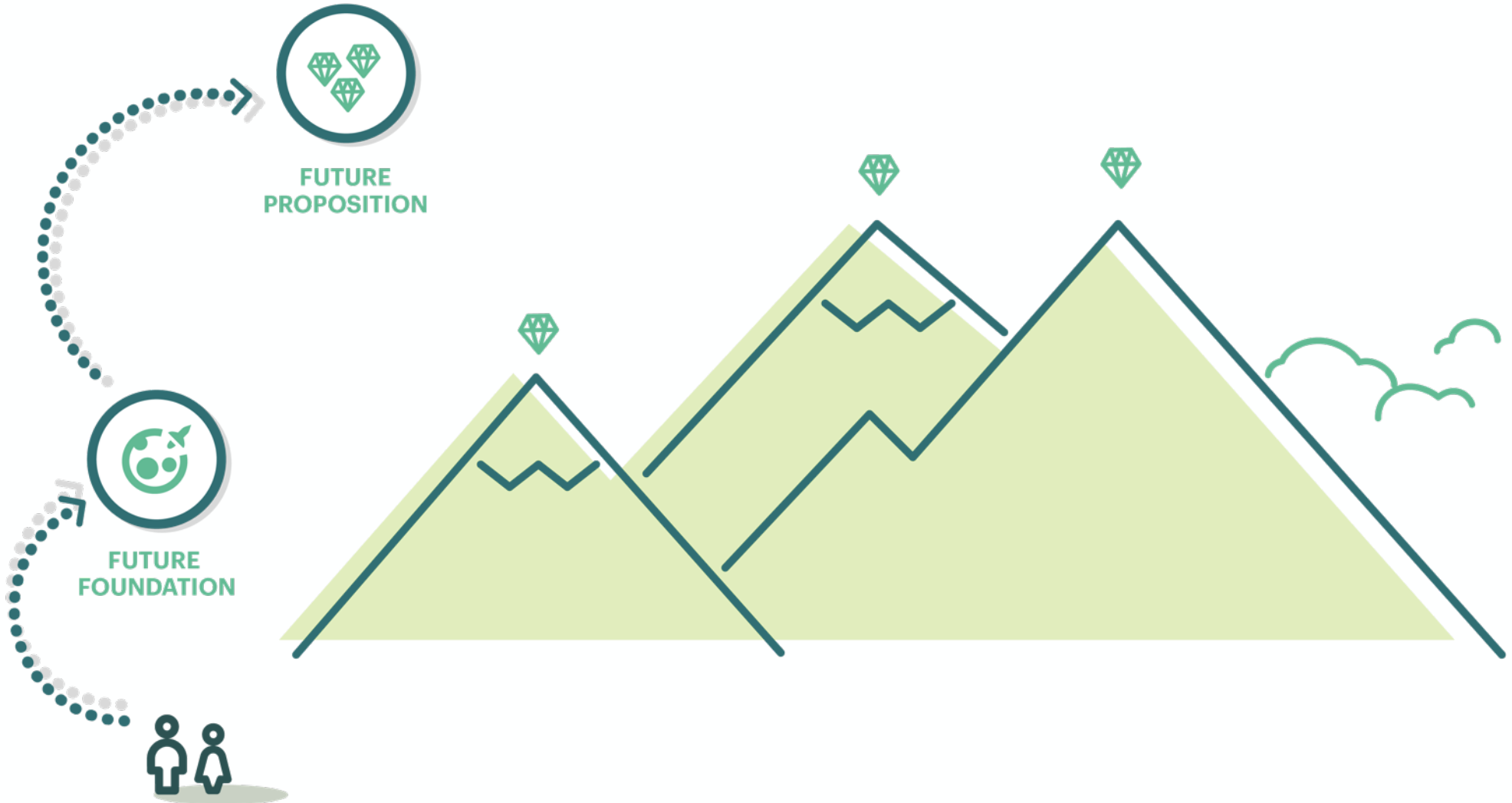
SEVERAL VALUE ANGLES CAN CREATE PROFITABLE AND SUSTAINABLE INNOVATION





MAERSK TANKERS DISCOVERY PROCESS





MAERSK TANKERS

Validation of
algorithmic
business tools

INSIGHT, BUSINESS DESIGN, CONCEPT, PROTOTYPING, UX



FLEXTANKERS FULL-SERVICE SELF-SERVICE LOGIN SIGN UP

Welcome to the business of data-optimized TCE for tankers!

Why miss out on the benefits of rich data insights and modern algorithms? It is easy to get started!

- 1 Gain awareness**
With our free TCE benchmarking tool
- 2 Choose setup**
With a self-service or full-service strategy
- 3 Optimize earnings**
With the latest technology applied to your chosen strategy

Benchmark your vessel's TCE

OCEAN SPIRIT
IMO: 166225
Vessel segment: MR

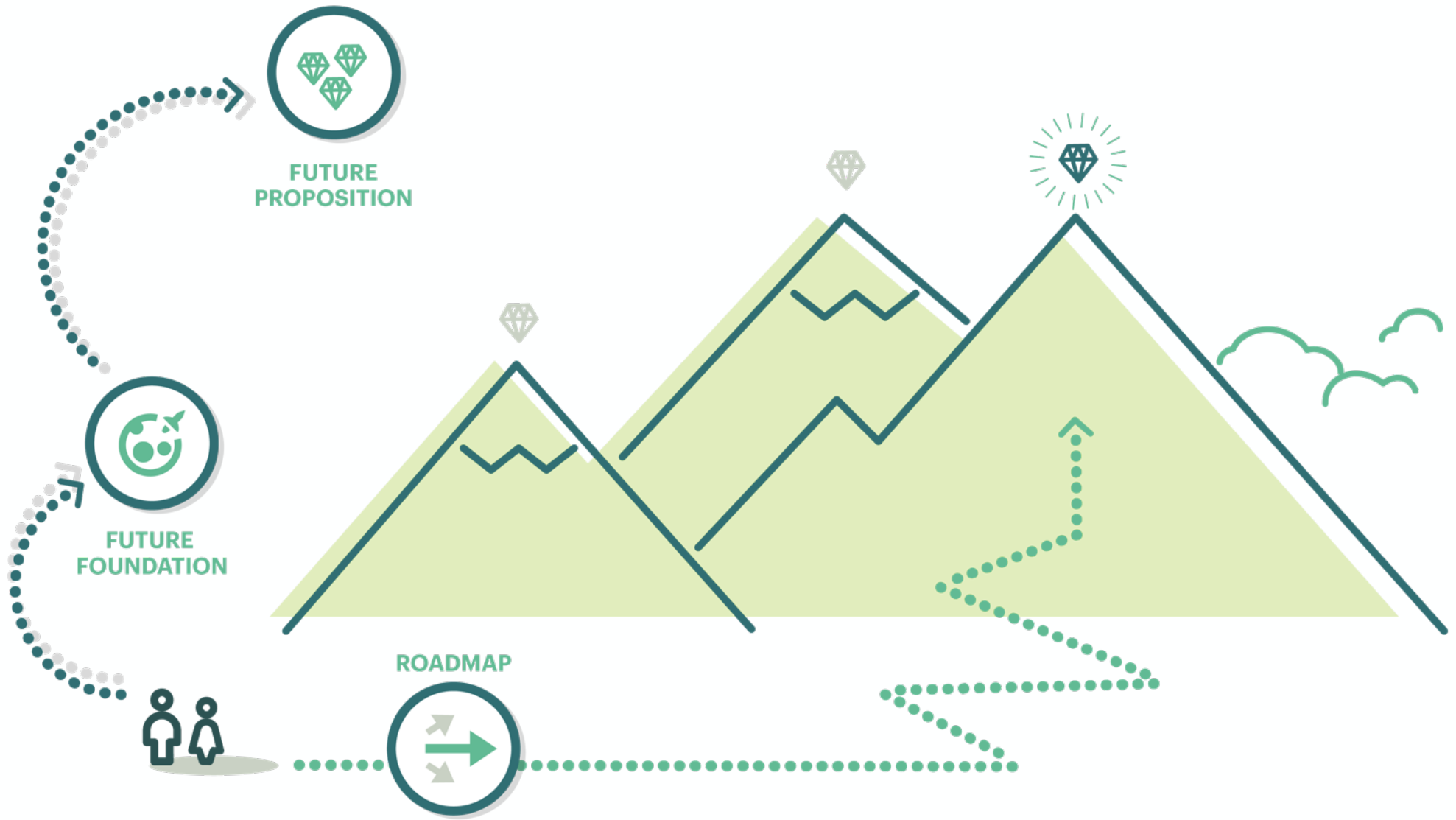
TCE benchmark

TCE/day (USD)

15.0k

With FlexTanker the average TCE/day would have been increased by:

+1,134 USD





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[Careers](#)

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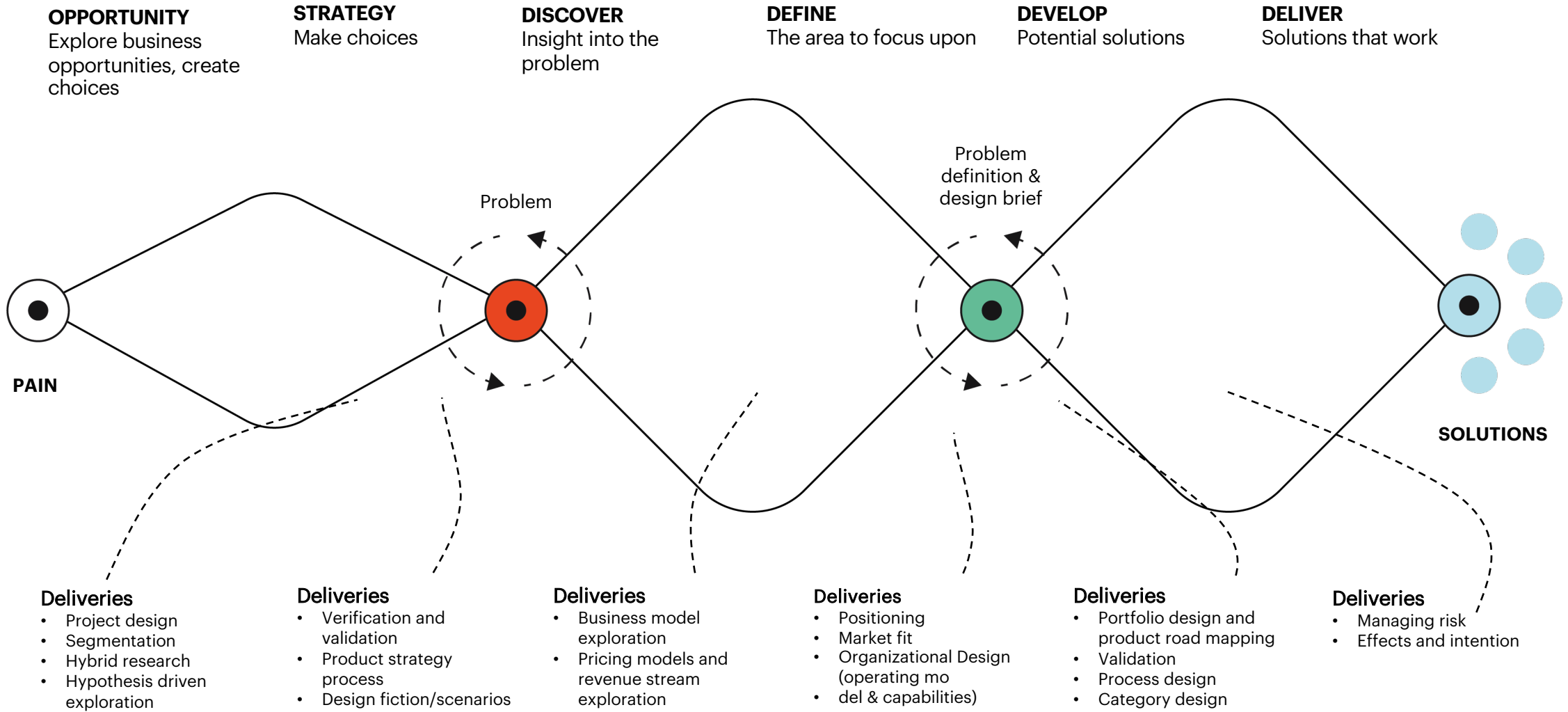
[Sound](#)

Digitalise shipping for the climate

[↘ Explore](#)



BUSINESS DESIGN OFFERING





MEAT EATERS



LEAD
..and shape the
industry



COMPETE
..starting selected
projects

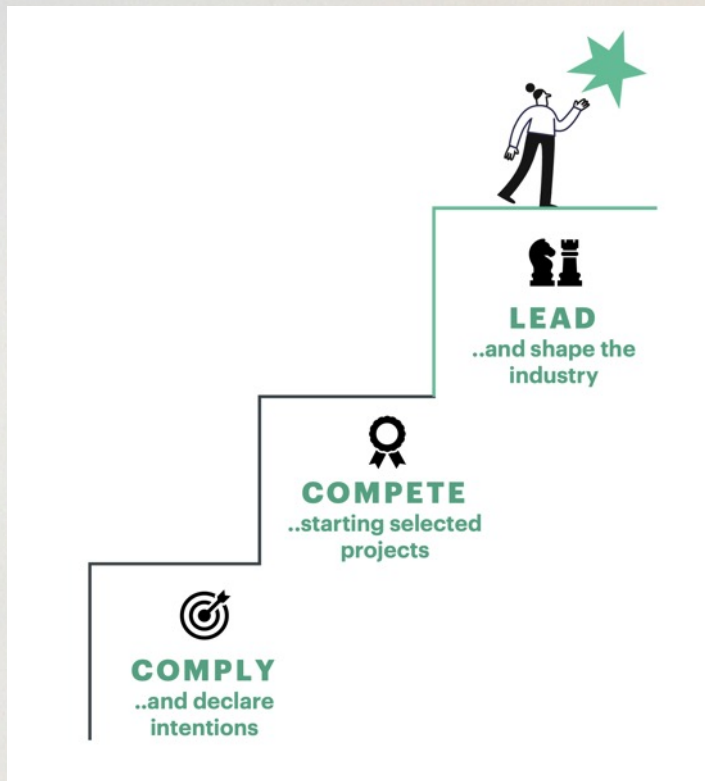


COMPLY
..and declare
intentions

SLOW
DOWN!

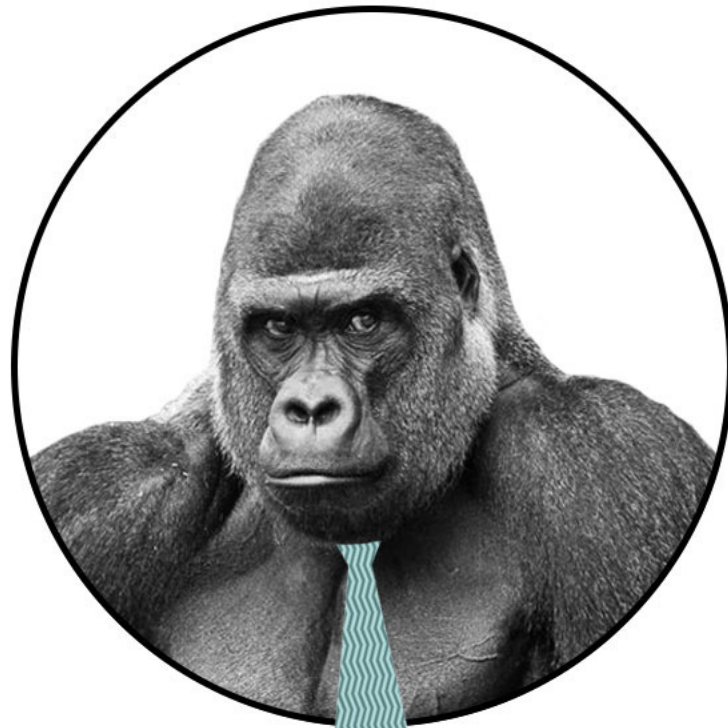


SPEED
UP!

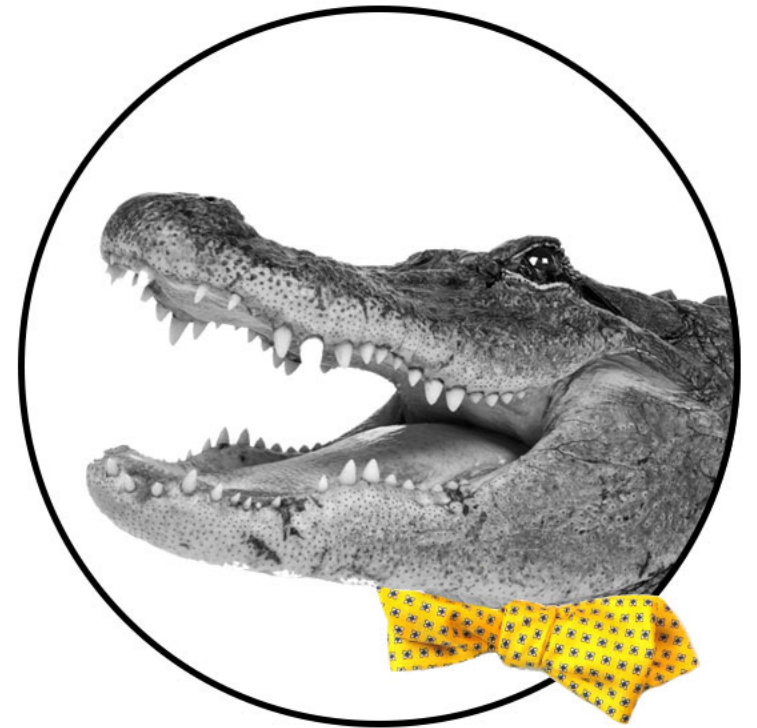




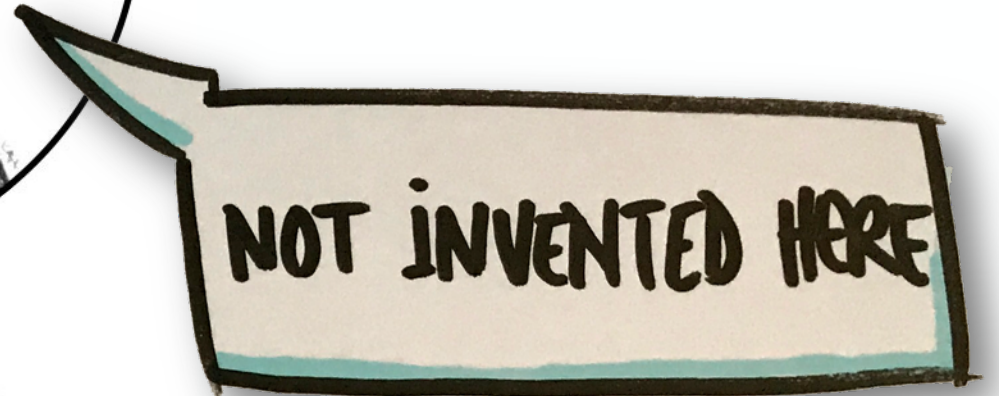

The Conservative
Expert



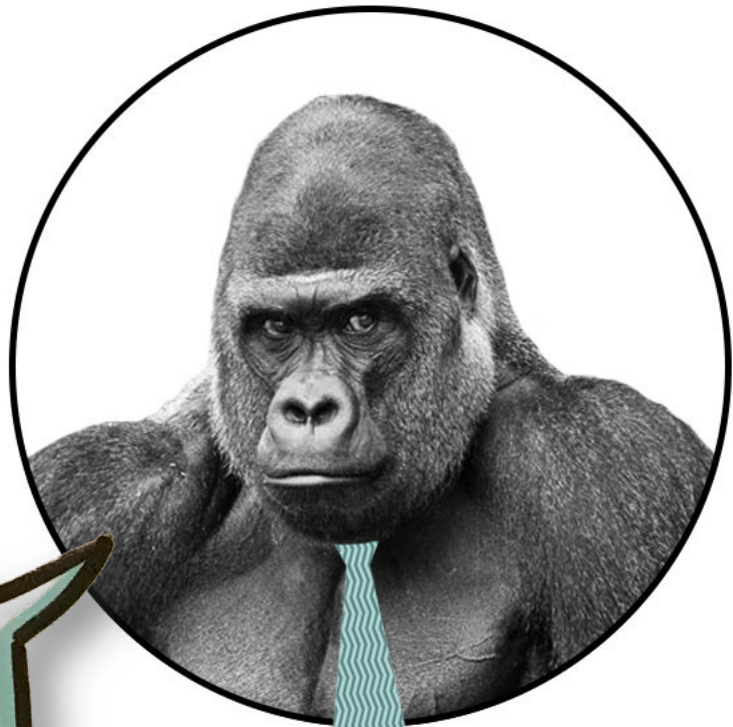

The Little
King




The Invisible
Decision maker




The Conservative
Expert



ME, ME, ME
... AND MY KINGDOM



The Little
King

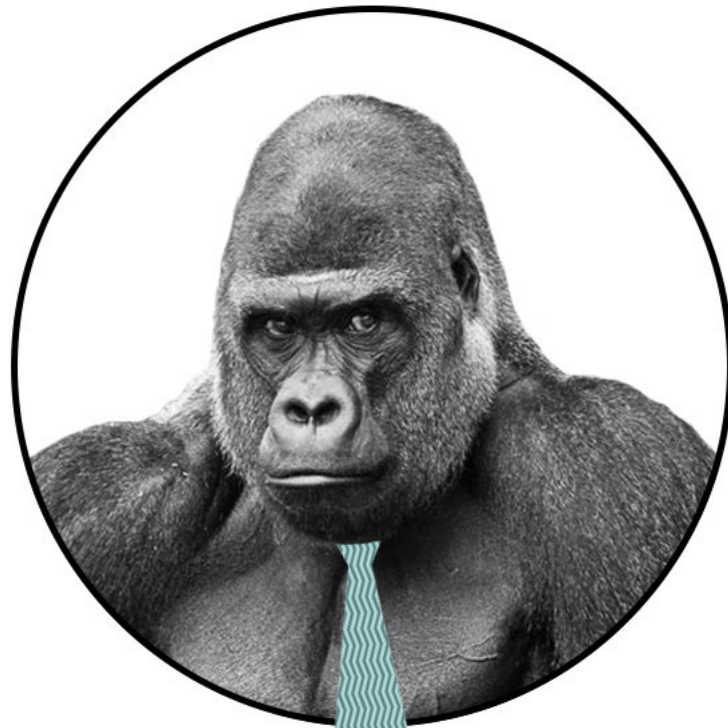



The Invisible
Decision maker

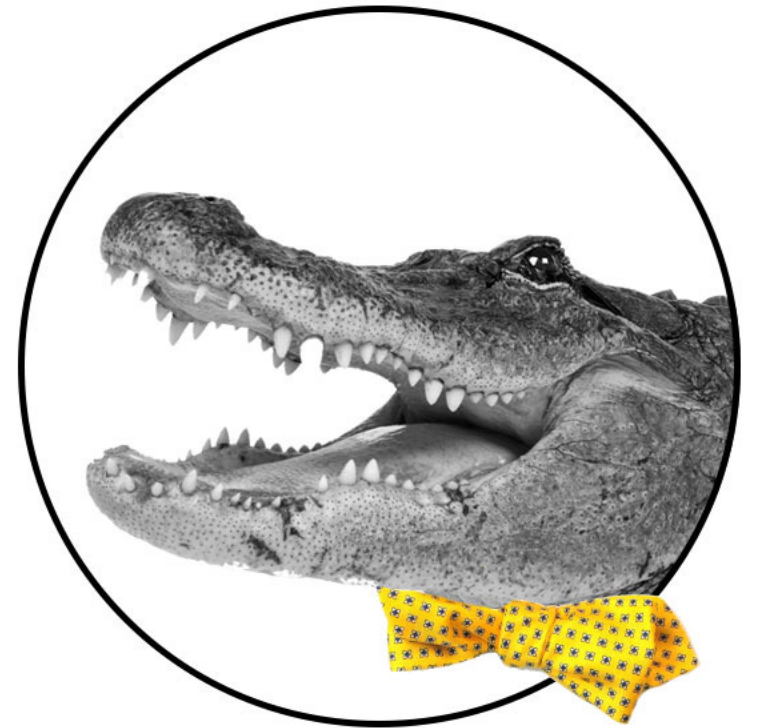
NOW YOU SEE ME,
NOW YOU DON'T




The Conservative
Expert




The Little
King




The Invisible
Decision maker



Paal Holter



paalholter

CXO, Partner, Co-Founder
@ EGGGS Design





**let's
craft
lovable
futures**

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