



Rohrbeck Heger
strategic foresight + innovation

Climate Change Impact on Logistics & Supply Chain Management

RH Future Atelier / Session #01

February 2021

SUMMARY REPORT & WORKSHOP DOCUMENTATION

FORESIGHT-DRIVEN STRATEGY & INNOVATION

Anticipating the future of logistics & supply chains towards 2030

On February 17th, Rohrbeck Heger and a multi-disciplinary group of participants from industry and academia engaged in a free virtual foresight-driven innovation session (2 hours), to uncover how to build more sustainable supply chains in the face of increasing climate change.

Participants used Rohrbeck Heger's four climate change scenarios, combined with persona-driven futures thinking, to anticipate what logistics and supply chain could look like in 2030 in the face of climate change. Generally, supply chains need to be more sustainable, but also resilient and efficient. Evaluating actions identified by participants across the four plausible scenarios towards 2030, here are five key take-aways:

Inaction is not an option

Action is urgently required. Inaction will only lead to compounded crises and a break-down of global supply chains and the global economy at large.

Resilience requires redundancy and partnering

Supply networks will be re-configured, with greater partnering and untraditional collaboration.

Local/regionalized supply chains will grow

Supply chains will become much more fragmented, with more local and regional strengthening of production and distribution lines.

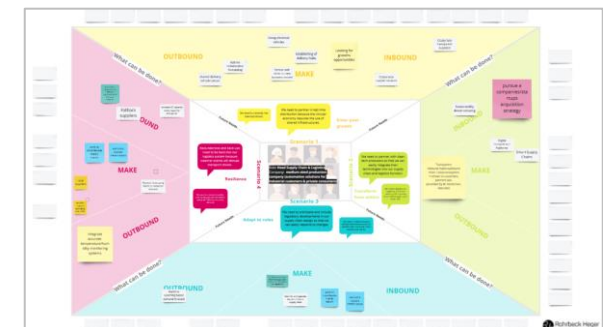
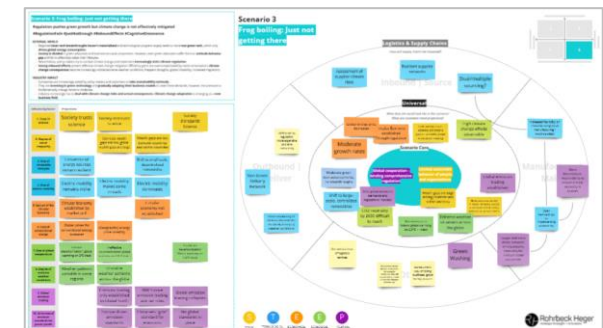
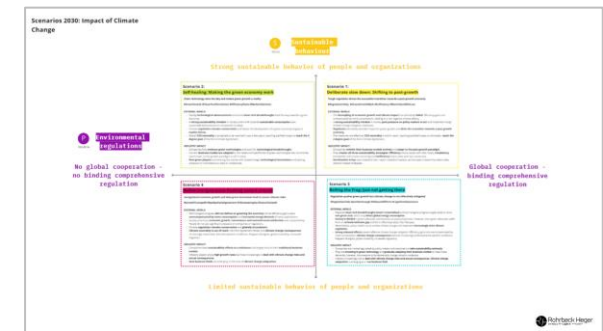
Delivery & logistics firms could become the next-gen retail

Logistics and delivery firms may increasingly move down the value chain and replace traditional retail. Especially if production becomes localized and nearer to the end consumer.

Sustainability over efficiency

If we are to meet the Paris Climate Agreement, it may be necessary to reject speed and efficiency, and acknowledge that a 'slower' supply chain is quite simply more sustainable.

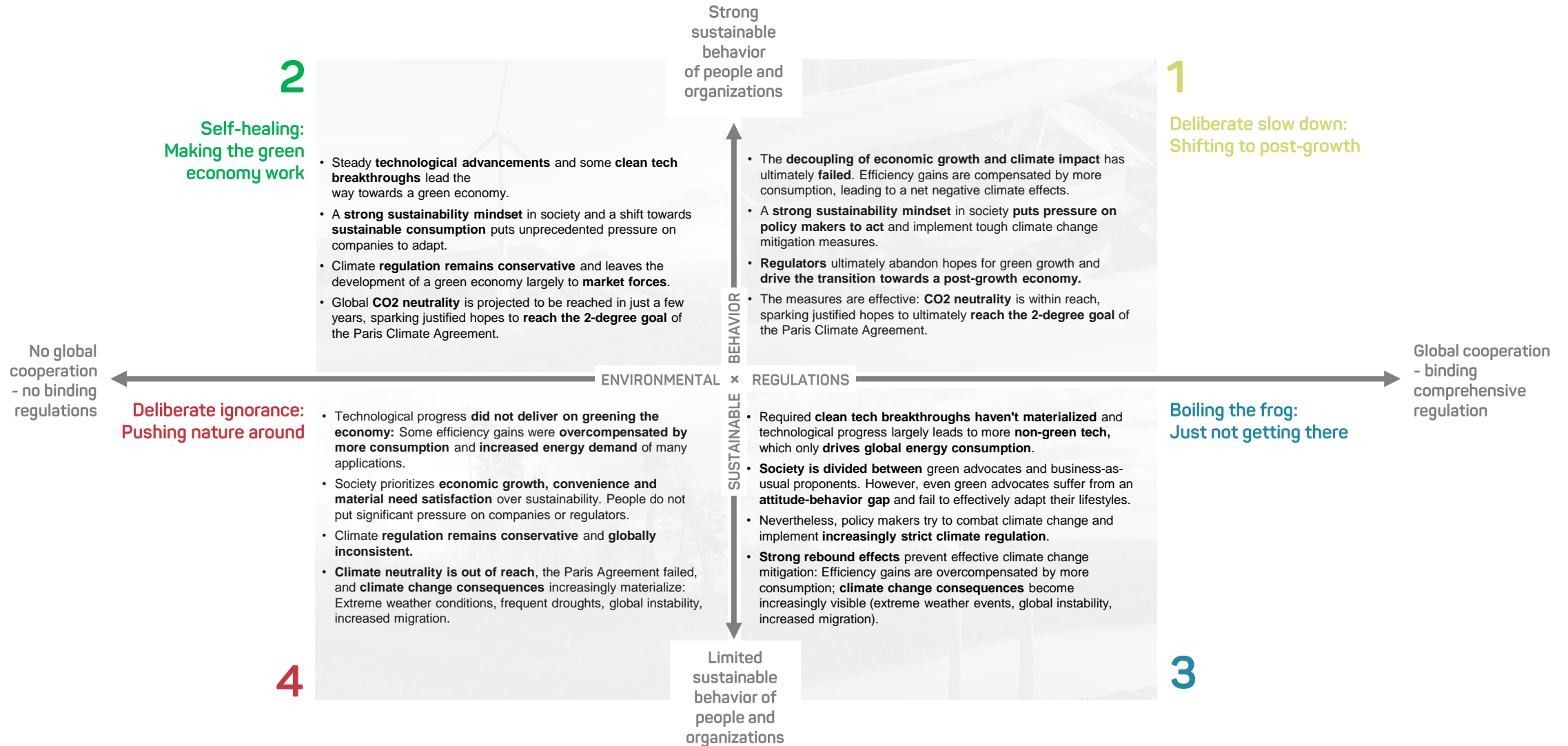
Screenshots from virtual workshop



FOUR CLIMATE CHANGE SCENARIOS (1/2)



FOUR CLIMATE CHANGE SCENARIOS (2/2)



SCENARIO ANALYSIS

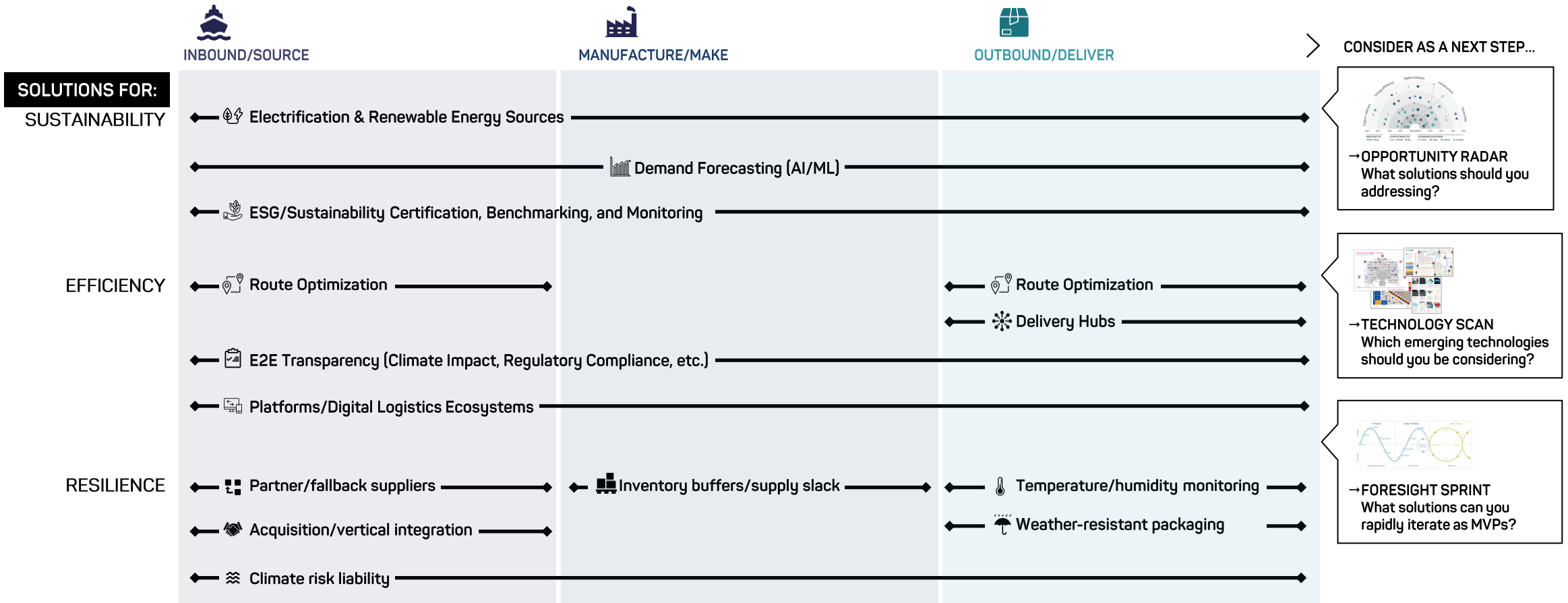
The future of Supply Chain & Logistics in 2030

SCENARIO	KEY DEVELOPMENTS TOWARDS 2030	INBOUND/SOURCE	MANUFACTURE/MAKE	OUTBOUND/DELIVER	IN THIS SCENARIO...
1 Deliberate Slow-Down Strong sustainable behavior of people and organizations Global cooperation - binding comprehensive regulation	<ul style="list-style-type: none"> Limited to moderate climate change effects Significant decarbonization – due to global emissions trading Electric mobility powered by decentralized renewable energy grids 	<ul style="list-style-type: none"> Much more local/near-shore sourcing Supplier certification the norm Uptake of sustainable sail-powered shipping 	<ul style="list-style-type: none"> Lower consumption – longer product life expectancy Less global trade More green and circular manufacturing (sustainable, recyclable inputs) 	<ul style="list-style-type: none"> Acceptance of slower logistics (longer delivery times) High level of automated delivery Emissions/carbon footprint monitoring & reporting by law 	→ Consumption and manufacturing 'slow down' → Focus in S.C./logistics is on sustainability over efficiency
2 Self-Healing Strong sustainable behavior of people and organization No global cooperation – no binding comprehensive regulation	<ul style="list-style-type: none"> Moderate climate change effects, primarily many extreme weather events CO2 neutrality by 2050 within reach – but emissions trading only established in Global North Steady green tech advancements, with high sustainability pressure on industry 	<ul style="list-style-type: none"> Regional and local sourcing Circular economy means fewer 'global' imports 	<ul style="list-style-type: none"> Production moves closer to the consumer Growth in at-home production (3D/4D printing) Supply chain transformation: supplying raw materials/components not goods 	<ul style="list-style-type: none"> Focus on customer experience Delivery companies become the new retail companies (reverse Amazon-ification) Supply chain transparency is the norm 	→ Production moves much closer to the consumer → Delivery/logistics companies become the next-gen retail companies
3 Deliberate Ignorance Limited sustainable behavior of people and organizations Global cooperation - binding comprehensive regulation	<ul style="list-style-type: none"> Extreme climate change effects & weather events Paris Climate Agreement impossible to reach Moderate green tech advancements, no breakthroughs though electric mobility dominates 	<ul style="list-style-type: none"> Resilient supplier networks Regulated monitoring of supplier climate risks Emergence of dual/multiple sourcing 	<ul style="list-style-type: none"> Flexible manufacturing – redundancy through multiple sites Open production partnerships for sustainability and resilience 	<ul style="list-style-type: none"> Shift to rail in many regions Non-green delivery network accepted by consumers 	→ Firms and supply chains focus heavily on resilience and redundancy → Traditional operating models and networks are disrupted
4 Boiling the Frog Limited sustainable behavior of people and organizations No global cooperation – no binding comprehensive regulation	<ul style="list-style-type: none"> Ineffective decarbonization: global warming on 2.5°C track Limited focus on sustainability No global standards in place; China leads the way in climate adaption and mitigation 	<ul style="list-style-type: none"> Insecure supply lines Decoupling needed – scarce resources 	<ul style="list-style-type: none"> Significant disruptions to production Need to buffer inventories and stock 	<ul style="list-style-type: none"> High emissions – still dominated by fossil fuels Limited smart city innovations & technology-driven benefits 	→ Infrastructure and economies will be in crisis → Supply chains are disrupted and insecure due to climate change
ACROSS ALL SCENARIOS...		→ Regional & local sourcing will increase → The entire value chain will be increasingly automated, intelligent and electrified			

FORESIGHT-DRIVEN IDEATION

Creating sustainable, efficient and resilient supply chains in 2030

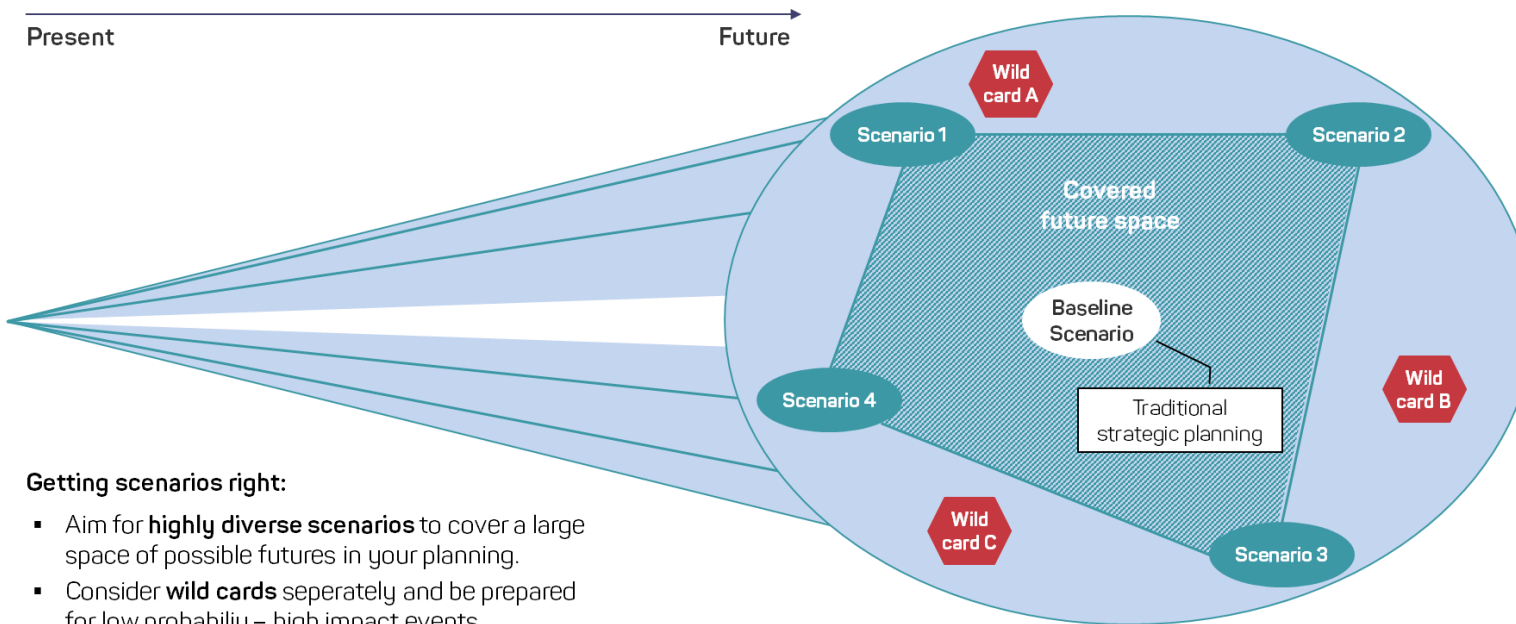
WHAT CAN WE DO ACROSS SCENARIOS TO BUILD RESILIENT SUPPLY CHAINS?



SCENARIOS

Scenarios anticipate future change – and are plausible narratives of what the future could look like.

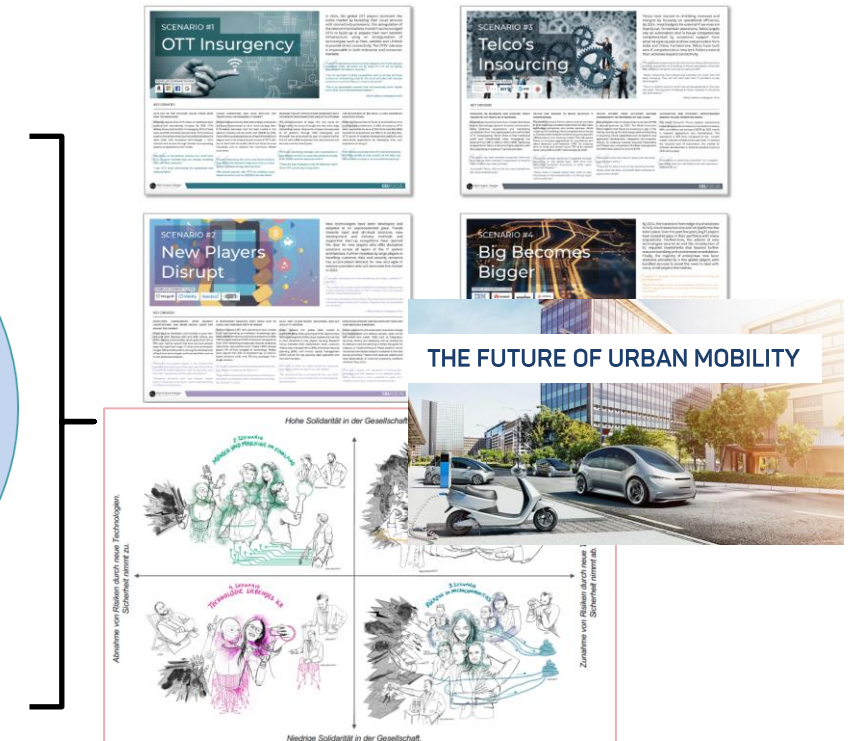
Scenarios must be systematically integrated into the organization's decision-making routine to make foresight a part of its DNA



Getting scenarios right:

- Aim for **highly diverse scenarios** to cover a large space of possible futures in your planning.
- Consider **wild cards** separately and be prepared for low probability – high impact events.

EXAMPLE SCENARIO VISUALIZATIONS & ANALYSES



SCENARIOS AS A TOOL

Informing robust long-term planning and decision-making



Scenarios are a key foresight tool. They acknowledge the simple fact that we cannot accurately predict long-term futures. Just think about 2021, and ask yourself if you would have predicted the current state of affairs 5 years ago?

Scenarios offer a way to develop **robust future-proof plans** from strategic to operational levels. By evaluating your actions and options against different plausible futures, firms use scenarios to anticipate change effectively.

For strategists, scenarios help uncover:

- Megatrends driving industry transformation
- 'Safe bets' – strategic actions with pay-offs in any scenario
- Future growth domains and portfolios

For innovators & business developers, scenarios help uncover:

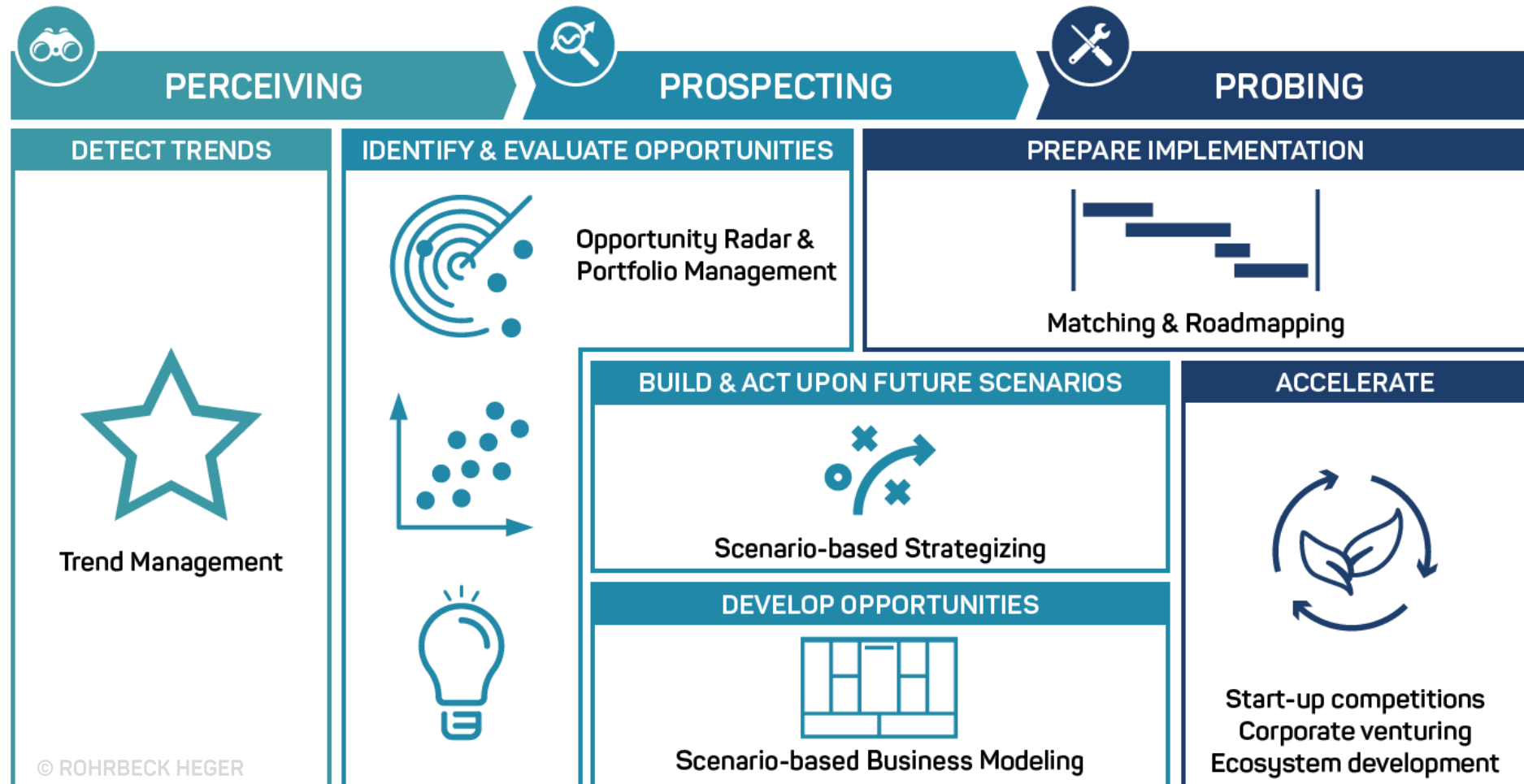
- Emerging consumer needs and requirements
- Disruptive technology innovations and business models
- Future product and service innovations

Selected RH scenario references



STRATEGIC FORESIGHT IN PRACTICE

Building the organizational capability to anticipate and act on change



LEARN MORE

Contact us to discuss how foresight can address your strategic challenges



Tobias Heger
Managing Partner

theger@rohrbeckheger.com



Dr. Sebastian Knab
Manager

sknab@rohrbeckheger.com



Jesper Niemann
Manager

jniemann@rohrbeckheger.com



Melanie Arz
Consultant

marz@rohrbeckheger.com



Chris de la Cerda
Consultant

cdelacerda@rohrbeckheger.com

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