Abstract: Strategic foresight, sustainability management and innovation management each have an important role to play in solving the grand challenges of our times. However, while each has developed into a professional discipline, we still lack an integrated approach in theory and business practice to deal with future sustainability and innovation challenges. To fill that gap, we conducted expert interviews with German foresight and sustainability experts. We explored good practices and methods, capabilities and competencies as well as persisting challenges at the intersection of the three fields. Our findings include that sustainability is seen as a relevant, but external factor in scenario projects, which competencies and forms of institutionalization make up foresight practices, emerging new small-scale practices and methods, and the persisting predominance of exploratory over strategic and normative scenario management approaches. We discuss the different expert perspectives and provide an overview of the emerging discourse on sustainability foresight and elaborate on the need for a values-based approach to strategic foresight contributing to sustainable development.

Sustainability Foresight
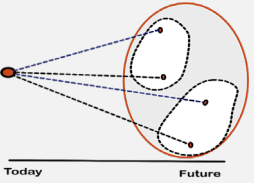## Practices and Methods for Future-Oriented Innovation Management
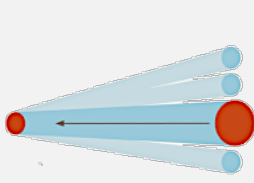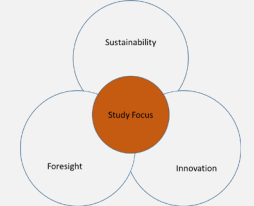
ISPIM Conference 2023 in Ljubljana, paper presentation by Prof. Dr. Henning Breuer, HMKW Berlin

Basic Approach / We conducted expert interviews to explore practices, methods and challenges at the intersection of three domains.

- Managers should dedicate 10-20 percent of their time thinking from 5- to 10-year time horizon in order to "**lead from the future**" (Johnson & Suskewicz 2020).

- How do and how should they approach the challenges of sustainable innovation and development?

- **Sustainability Foresight** applies foresight practices and methods to facilitate sustainable development and to enhance organizational preparedness for future sustainability challenges. We seek to develop such an approach …
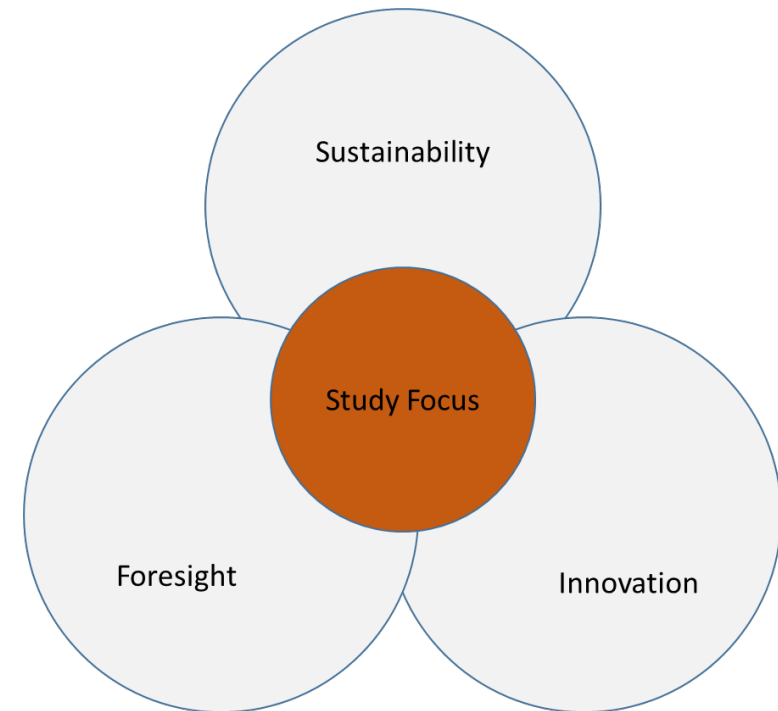
Motivation and Basic Approach / We initiated the SF4S project to address four challenges that we are dealing with in co-development projects.

	I. Industry needs for futures literacy and accessibility of foresight methods	How can we promote futures literacy in organisations and mainstream utilisation of foresight methods? **-> Co-development projects leveraging good practices**
	II. Neglect of values and normative future scenarios in innovation management	How can we facilitate adoption of normative scenarios to deal with innovation challenges? **-> Combination of exploratory and normative scenarios**
	III. Need to integrate currently distributed efforts to manage future scenarios, sustainability and innovation	How can we integrate scenario management, and innovation management to promote sustainable development? **-> Grand challenges across stakeholders & organisations**
	IV. Need to advance green, digital and foresight skills in higher education and professional development	How can we enhance green digital and foresight skills among students and innovation professionals? **-> Industry cases & new accessible methods for education & training**

Expert interviews / We interviewed nine experts from Germany.

1. **Klaus Burmeister**, futures researcher, and founder or foresightlab & Z_punkt, The Foresight Company

2. **Dr. Alexander Fink**, futures researcher, strategy consultant, co-founder and CEO of ScMI (Scenario Management International)

3. **Dr. Robert Gaßner**, futures researcher, facilitator and founder of Preferable Futures, Office for Futures Research and Goal Setting

4. **Matthias Kuom**, futures researcher and innovation manager, working for various funding institutions, currently as Seconded National Expert (END) at the European Commission

5. **Beate Schulz-Montag**, futures researcher, organisational consultant and facilitator moderator with long experience in corporate and public foresight

6. **Dr. Karlheinz Steinmüller**, futures researcher, science fiction author and director at Z_punkt, The Foresight Company

7. **Industry experts** (IE1, IE2 & IE3) from different companies in the aviation industry
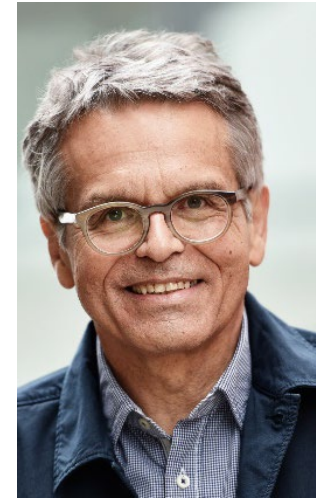
+3 aviation-related foresight or sustainability experts

HMKW

SIG — Values-Based & Sustainable Innovation

SF4S — STRATEGIC FORESIGHT FOR SUSTAINABILITY

# Expert interviews / We found five recurring issues.

1. **Sustainability**: Sustainability has long arrived in futures research and corporate foresight as a key factor in scenario projects, but it is usually treated as an external factor.

2. **Institutionalization** of foresight practices: The futures journey does not end but start with scenarios. Few companies have established integrated foresight practices.

3. **Anchoring and competences**: Adequate organizational anchoring, internal promoters as well as personal competences are required to establish and sustain any foresight.

4. **Foresight methods**: Reviews at regular time intervals, new small-scale practices and easily accessible methods facilitate futures thinking.

5. **Methodology:** Predominance of exploratory and strategic over normative scenarios – even though subjectivity and normativity are inevitable.

Methodology / Exploratory and strategy scenarios are created in five steps.
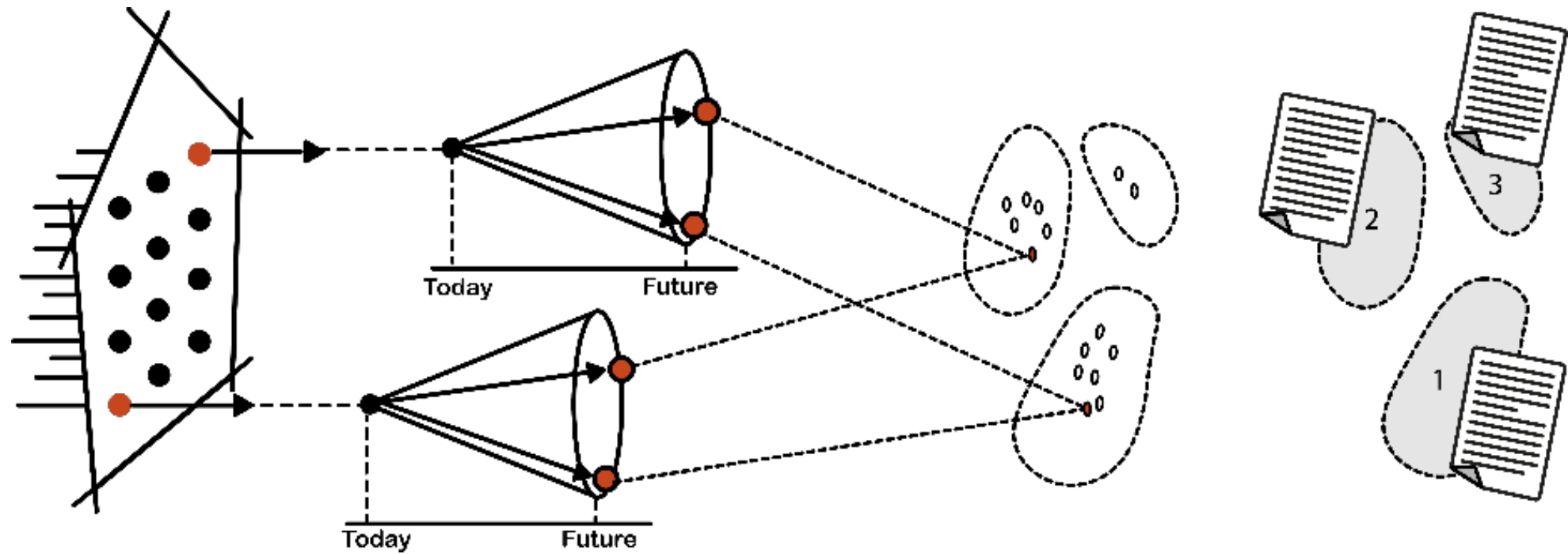
Methodology / Different approaches involving subjectivity and stakeholder values are used to for the create normative scenarios.
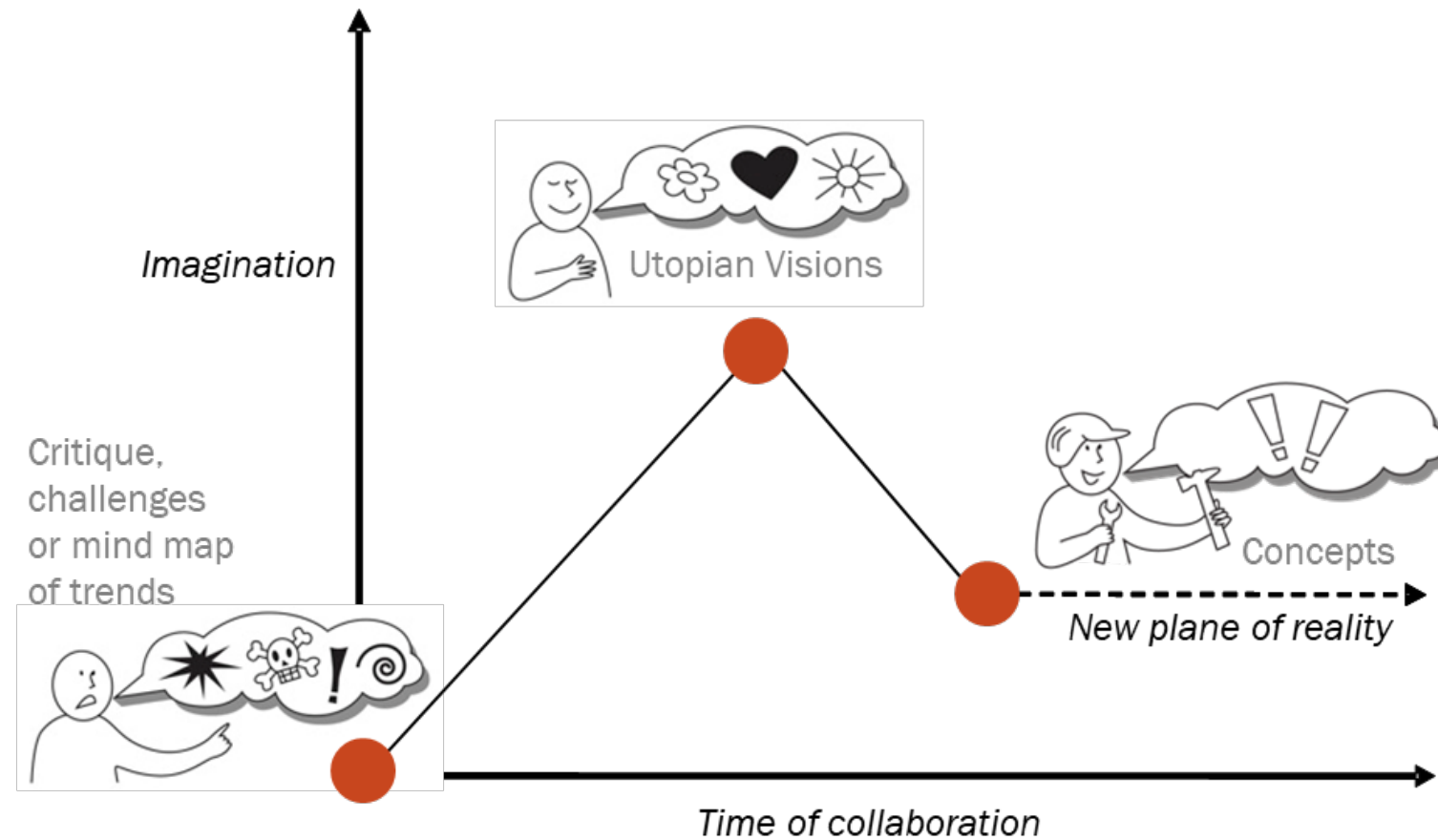
Methodology / Disambiguation helps to see the differences between strategic and normative scenarios.

	Strategy Scenarios	Normative Scenarios
Focus	**Strategic management** issues (e.g. competitive advantages and differentiation) with implications on operational management	**Normative management** issues (vision, mission, purpose) and implications for strategic and operational management
Foundation	Based on analysis of market potentials and corporate capabilities (future **options**)	Based on ethical principles and values and corporate **identity**
Contribution	Mainly serving the (economic) self-**interest** of the organisation	Alignment with (also ecological and social) **values** of stakeholders
Resources	**Professional** experience of members of the organisation, and strategic reasoning	Unique experience, perferences and values of the „**whole person**" – reflected subjectivity
Approach	**Projection** and combination of strategic options (instead of key factors)	**Envisioning** a desirable world (vision, mission, purpose)
Example	SCMI from future options to strategy scenarios and strategy maps	Gassner & Steinmüller (2005): Normative narrative scenarios for participative foresight

Methodology / In a values-based view, normative scenarios contribute to identity formation and identify strategic options for sustainable innovation.
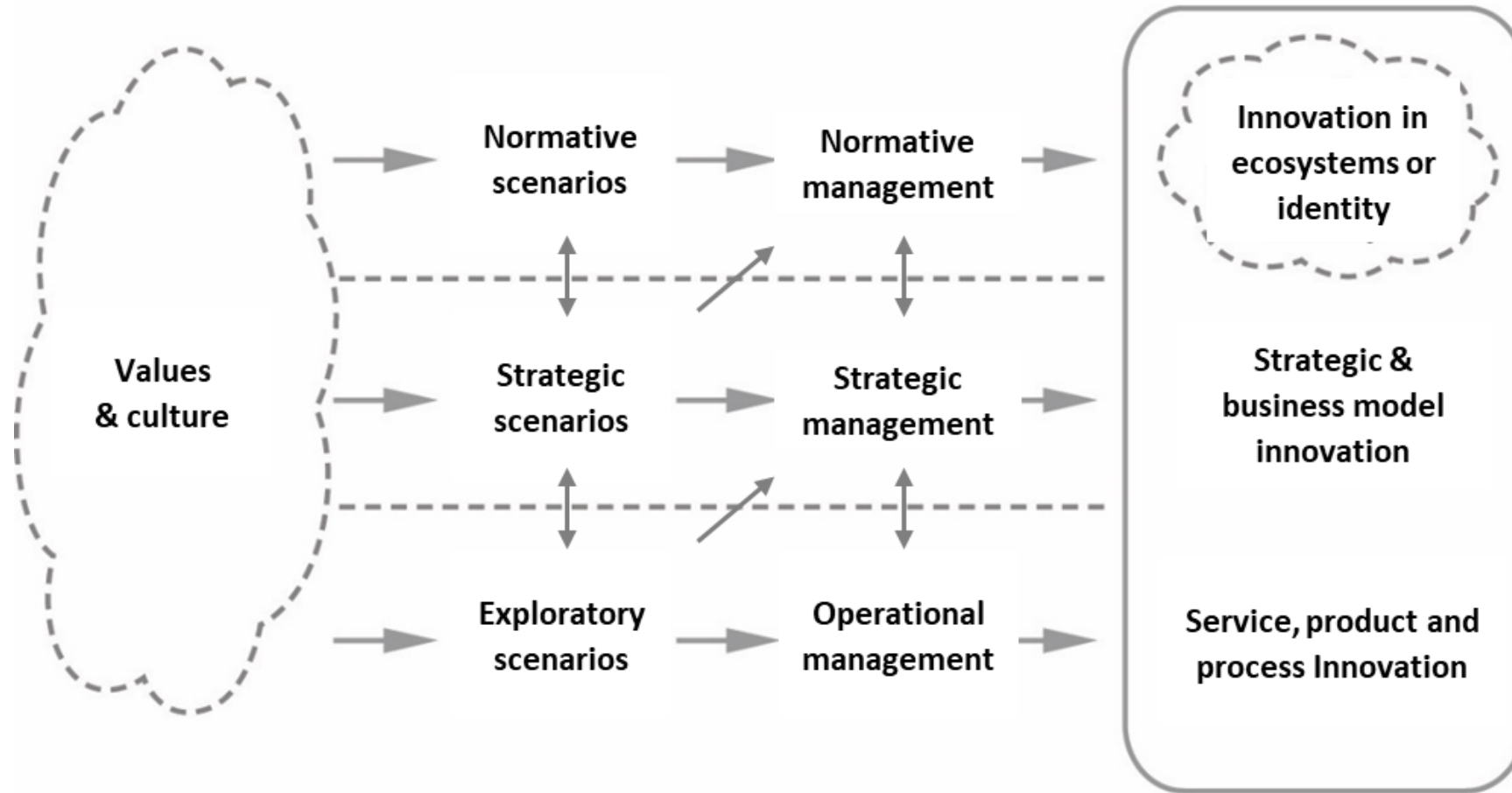
Take-aways / Sustainability foresight research and practices are just emerging, helping to identify strategic options for sustainable innovation.

1. **Sustainability Foresight**: Combine both a normative directive towards enhancing sustainability and strategic foresight as a means to this end: Sustainability not only as a factor influencing social and corporate development, but as a requirement and target perspective for values-based innovation.

2. **Reflective subjectivity:** The non-factuality of future images throw us back on subjectivity and notions of what stakeholders find desirable in the process of creating exploratory and/or normative scenarios. *Reflective subjectivity* on behalf of the participants and the elicitation of stakeholder values are basic though often neglected methodological building blocks of any futures research.

3. **Values creation:** Are findings from comparative studies on economic superior value creation through foresight (Rohrbeck & Kum 2018) transferable to social and ecological value creation?

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Thank you for your attention!

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