itonics
campus

TREND-DRIVEN INNOVATION

Prof. Dr. Carolin Durst

Agenda

1. Setting the scene

Understand the purpose of trend-driven innovation. How to define an innovation challenge?

2. Understanding trends

Recognize trends and understand changes

3. Researching trends

Identification of relevant trends for the individual challenges

4. Evaluating trends

Evaluation of relevant trends for the individual challenges

5. Discover innovation opportunities with the trend radar

Explore trends, identify and describe new fields of innovation

1. Setting the scene

Understand the purpose of trend-driven innovation. How to define an innovation challenge?

"After 40 years of the Federal Republic, a new generation in Germany should not be lied about the chances of reuniting. They do not exist."

Gerhard Schröder – June, 1989

"I think there is a world market for maybe five computers."

Thomas Watson, chairman of IBM, 1943

"Television won't last because people will soon get tired of staring at a plywood box every night."

Darryl Zanuck, movie producer, 20th Century Fox, 1946

"Who the hell wants to hear actors talk?"

Harry M. Warner, Warner Brothers, 1927

"Sensible and responsible women do not want to vote."
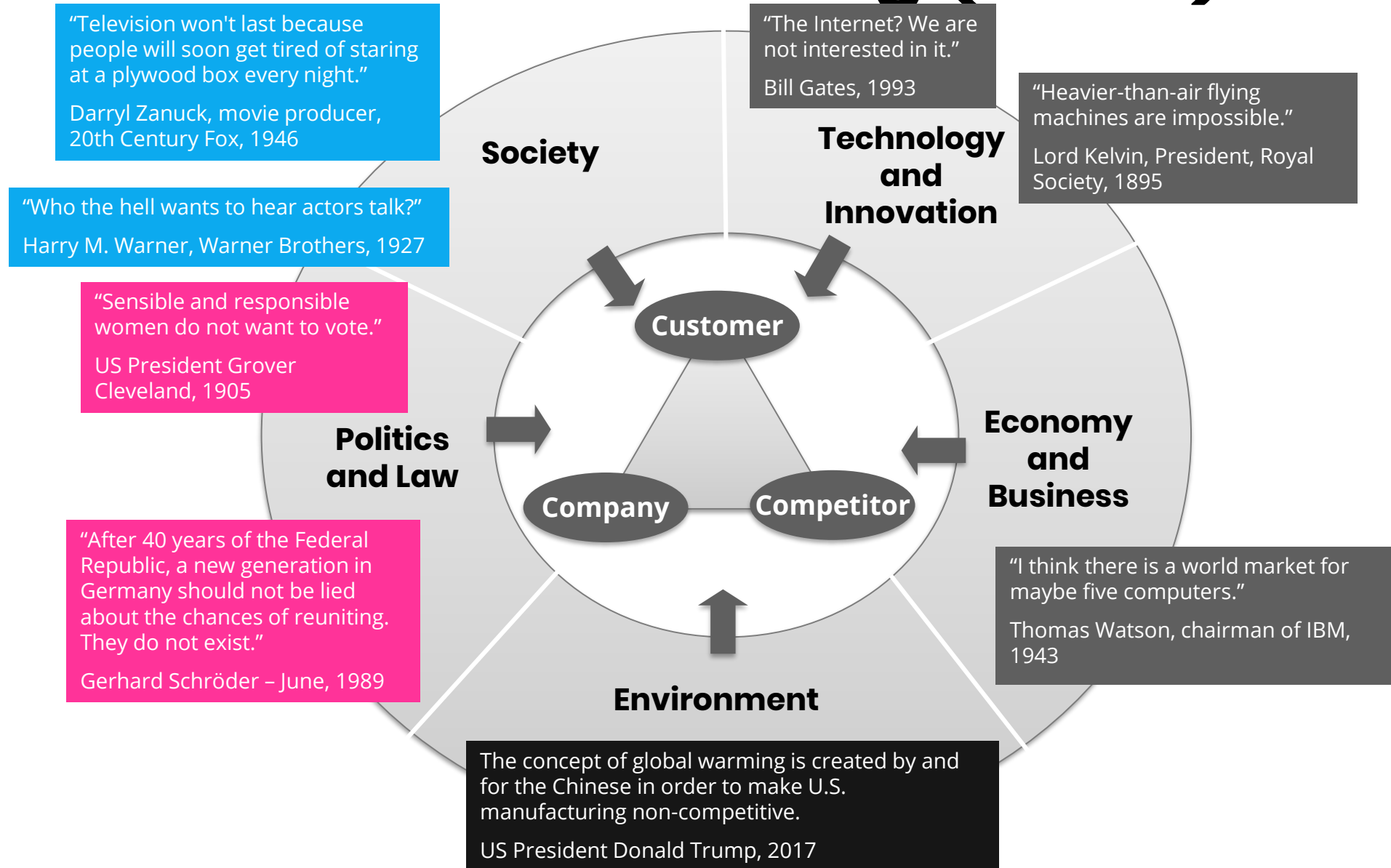
US President Grover Cleveland, 1905

"Heavier-than-air flying machines are impossible."

Lord Kelvin, President, Royal Society, 1895

"The Internet? We are not interested in it."

Bill Gates, 1993

4

Environmental scanning (STEEP)

"Television won't last because people will soon get tired of staring at a plywood box every night."

Darryl Zanuck, movie producer, 20th Century Fox, 1946

"Who the hell wants to hear actors talk?"

Harry M. Warner, Warner Brothers, 1927

"Sensible and responsible women do not want to vote."

US President Grover Cleveland, 1905

"After 40 years of the Federal Republic, a new generation in Germany should not be lied about the chances of reuniting. They do not exist."

Gerhard Schröder – June, 1989

"The Internet? We are not interested in it."

Bill Gates, 1993

"Heavier-than-air flying machines are impossible."

Lord Kelvin, President, Royal Society, 1895

"I think there is a world market for maybe five computers."

Thomas Watson, chairman of IBM, 1943

The concept of global warming is created by and for the Chinese in order to make U.S. manufacturing non-competitive.

US President Donald Trump, 2017

Society

Technology and Innovation

Economy and Business

Environment

Politics and Law

Customer

Company

Competitor

Company life-cycle phases

1st Phase	2nd Phase	3rd Phase
Founding of enterprise and commercialization of initial invention	Development of new radical innovations and new market creation	Development of a future orientation to sustain the competitive advantage

Many firms fail to replace/renew the initial invention

Many firms fail to respond adequately and timely enough to survive external change
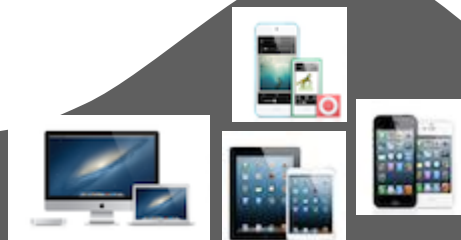
Input for Strategic Innovation Management

Technology
- New technologies/ tech trends
- Short technology cycles
- Patents and publications

Politics
- Funding programs
- New laws and regulations
- Guidelines, limitations, etc.

Own business
- Innovation culture
- Growing complexity in all business areas and processes
- Limitied financial resources

Market and competition
- International competition
- Shorter product life cycles
- Innovation as an instrument for competition

Customers
- Specific demands
- Decreasing loyalty
- New trends

Input for Innovation Management

INNOVATION STRATEGY

Longterm competitive advantage
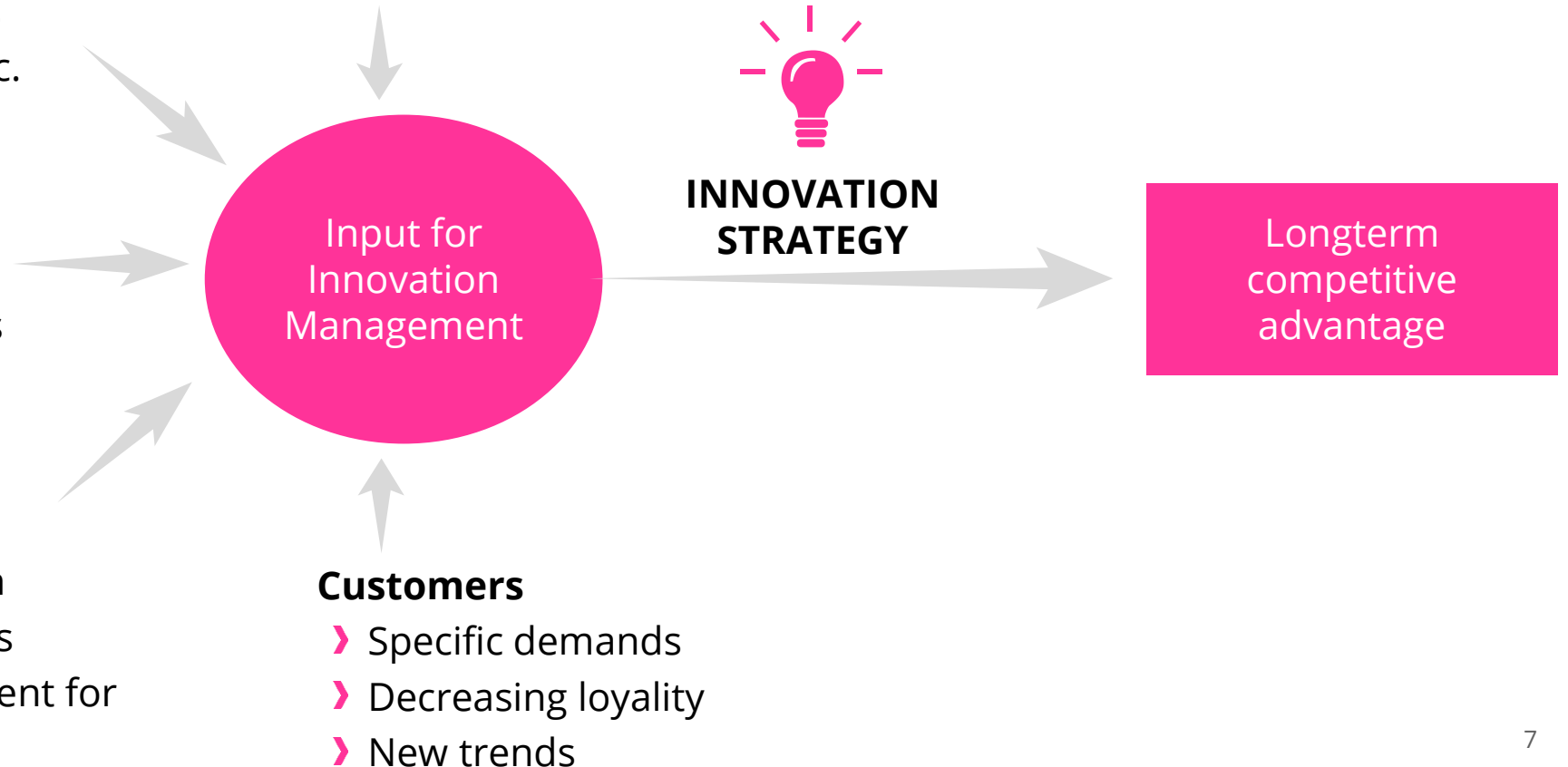
But...

> **THE VAST MAJORITY OF EXECUTIVES**, 93 PERCENT, HITCH THEIR COMPANY'S **LONG-TERM SUCCESS** TO THEIR **ABILITY TO INNOVATE** BUT AT THE SAME TIME, **LESS THAN 18 PERCENT** BELIEVE THEIR **OWN INNOVATION STRATEGY** IS DELIVERING A COMPETITIVE ADVANTAGE .

Source: Accenture, "Why low risk innovation is costly", Mai 2013

Typical situation in innovation management

Corporate strategy

- Target markets
- Target customers
- Product fields
- etc.

Early stages of the innovation process

- Randomness
- No rules
- No processes
- Passive idea collection
- Passive monitoring of trends

Implementation

- Stages
- Rules
- Routines
- Milestones and gates
- Roadmaps
- etc.

✓ **Well defined business environment**

✗ **Black box**

✓ **Well-understood process**

Challenges for companies

Market view

› International business options

› Short technology cycles

› High risk of investment

› Very specific customer needs

› Loss of customer loyalty

› International competition
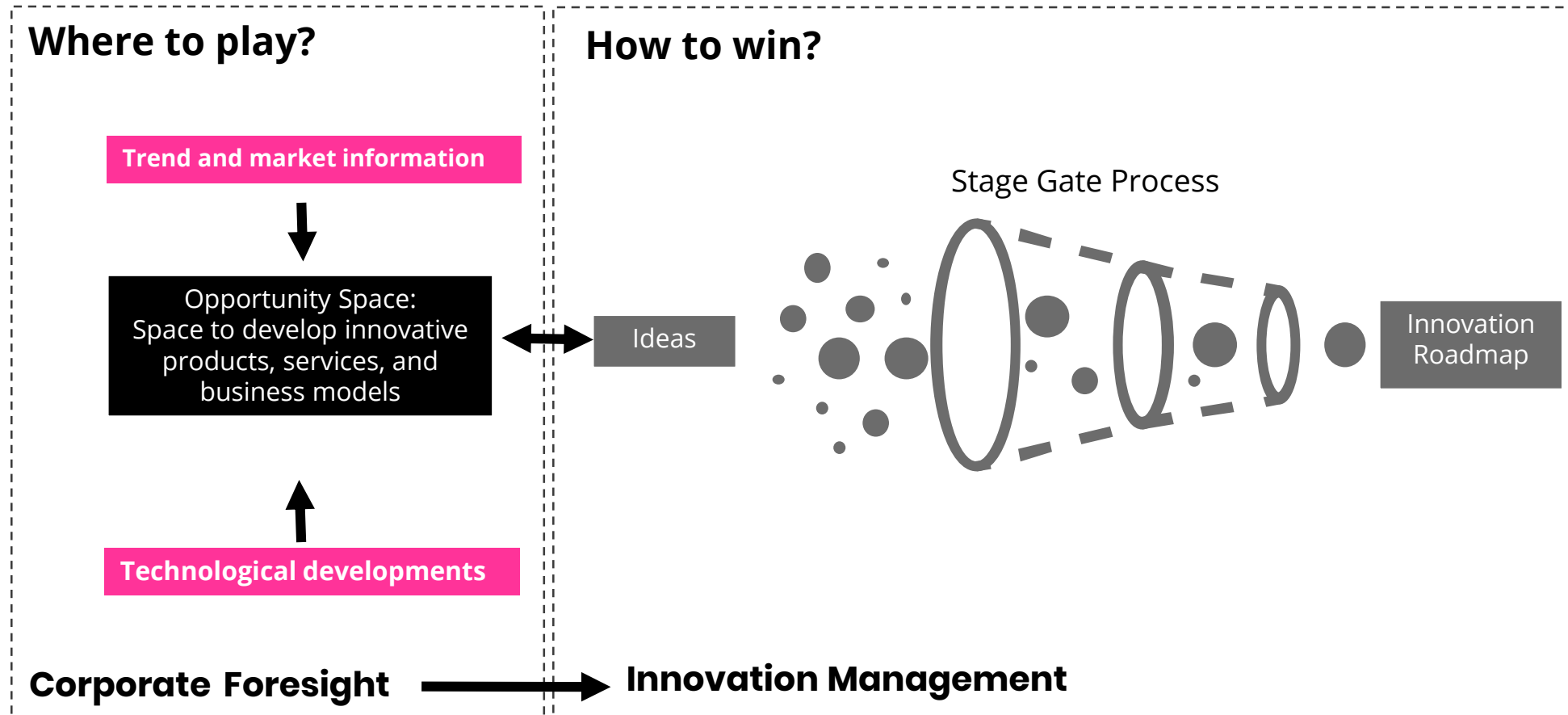
› Shorter product life cycles

› Digital Everything

Sustainable strategy focusing on strategic innovation and growth

Company view

› Limited strategy making capabilities

› Limited business options

› „Organizational Blindness"

› Shortage of methods and practices to adapt to dynamic markets

› Limited budgets and manpower in strategic innovation management
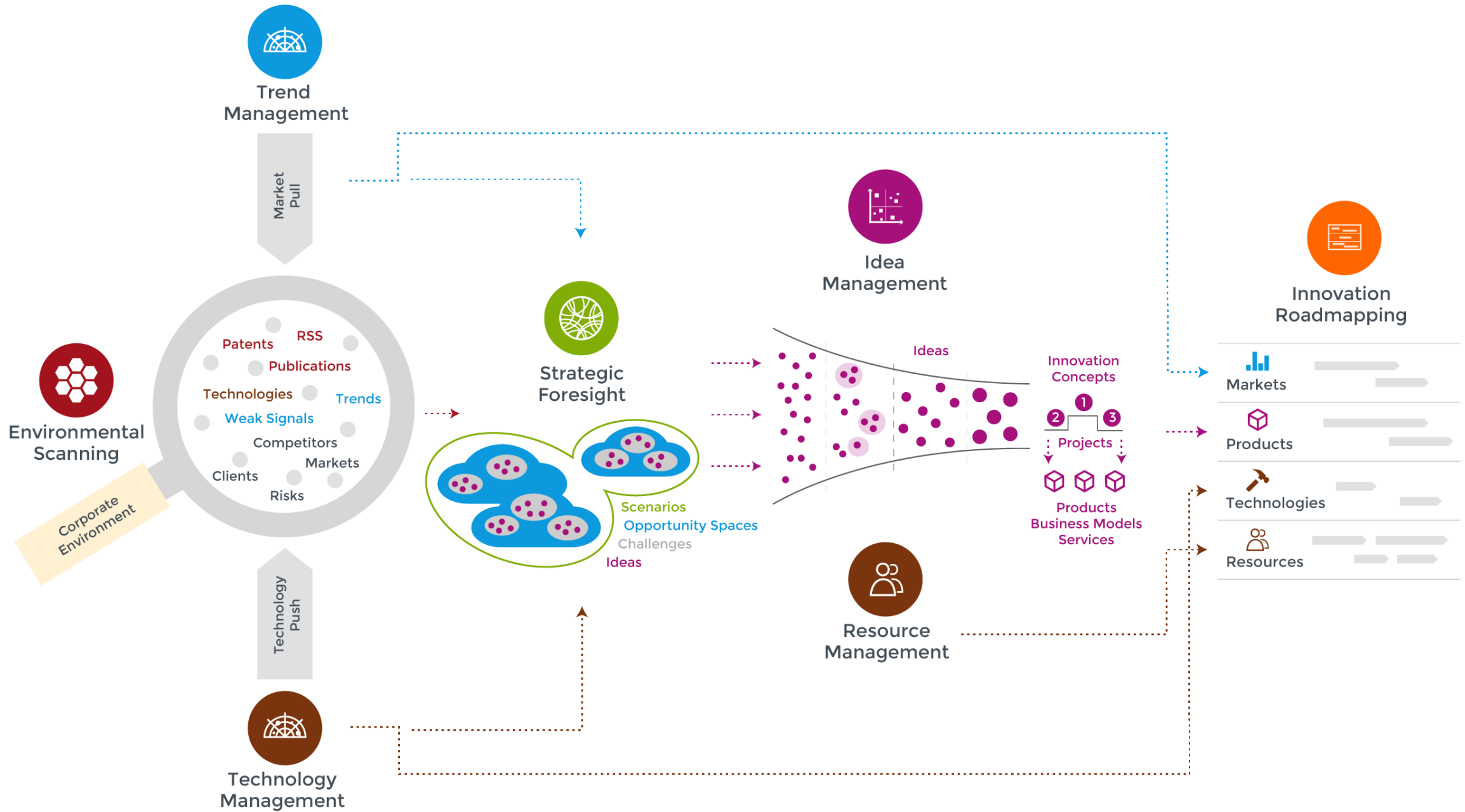
› External speed much higher than internal speed

Where to play? How to win?

Where to play?

Trend and market information

↓

Opportunity Space:
Space to develop innovative products, services, and business models

↑

Technological developments

Corporate Foresight →

How to win?

Stage Gate Process
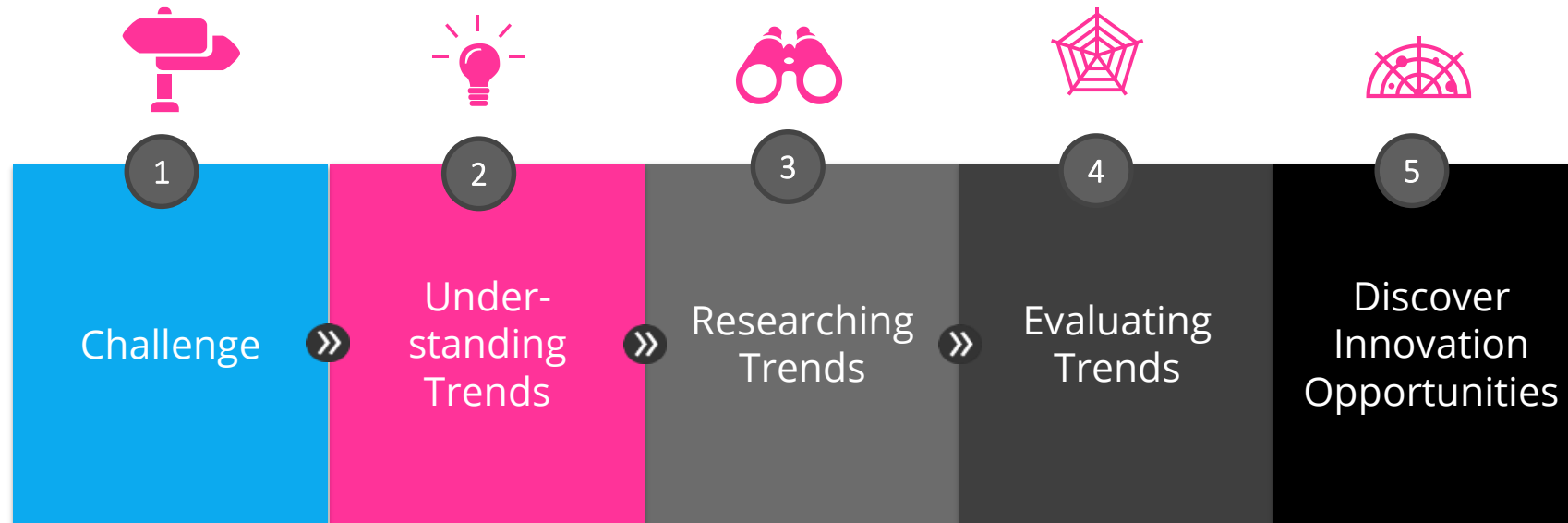
Ideas

Innovation Roadmap
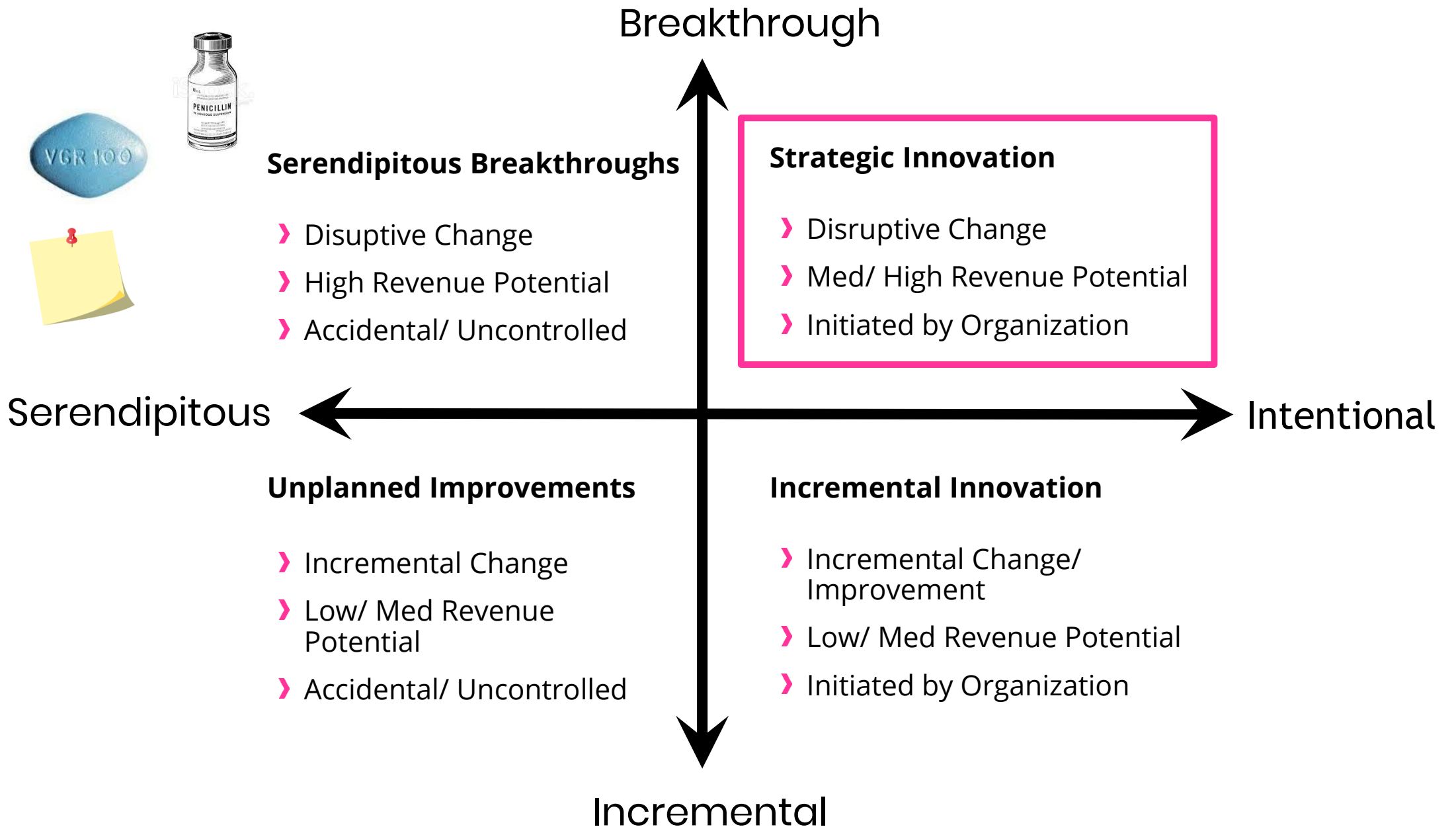
Innovation Management

Source: Durst, C. und Durst, M. (2016): Integriertes Innovationsmanagement – vom Umfeldscanning zur Roadmap. In: Abele: Die frühe Phase des Innovationsmanagments. Springer.
Download: https://www.itonics-innovation.com/end2end-innovation-lp

Trend
Management

Environmental
Scanning

Market
Pull

Corporate
Environment

Patents
RSS
Publications
Technologies
Trends
Weak Signals
Competitors
Clients
Markets
Risks

Technology
Push

Technology
Management

Strategic
Foresight

Scenarios
Opportunity Spaces
Challenges
Ideas

Idea
Management

Ideas

Innovation
Concepts

2 1 3

Projects

Products
Business Models
Services

Resource
Management

Innovation
Roadmapping

Markets

Products

Technologies

Resources

Trend-driven innovation process

1	2	3	4	5
Challenge	Under-standing Trends	Researching Trends	Evaluating Trends	Discover Innovation Opportunities

Task 1

Define your challenge

› What do you want to solve (actual problem)?
› Who do you want to serve (hidden needs)?
› Which industry is affected?
› Which market is affected?
› What is the challenge (behind your idea)?

Future of retail banking:
For which banking products and services will the customer pay in the future?

Mobility:
How can we address the need for seamless mobility?

Food and beverage:
How can we make use of an increasing multicultural population?

2. Understanding trends

Recognize trends and understand changes

Weak signals, hypes or trends?

What you can observe
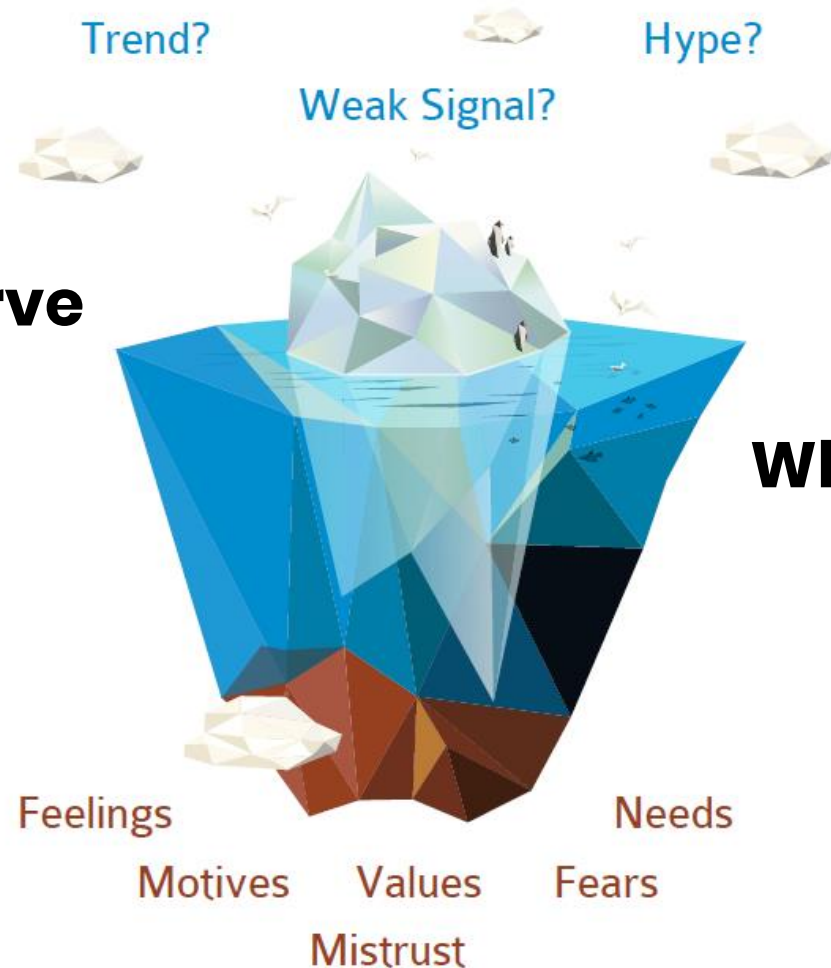
What you can't observe

From weak signal to trends

States of ignorance under discontinuity

States of Knowledge / Info Content	(1) Sense of threat/ opportunity	(2) Source of threat/ opportunity	(3) T/O Concrete	(4) Response Concrete	(5) Outcome Concrete
Conviction that discontinuities are impending	YES	YES	YES	YES	YES
Source of discontinuity identified	NO	YES	YES	YES	YES
Characteristics, nature, gravity, and timing of impact understood	NO	NO	YES	YES	YES
Response identified timing, action, programs, budgets can be identified	NO	NO	NO	YES	YES
Profit impact and consequences of response are computable	NO	NO	NO	NO	YES

Source: Ansoff, H. (1975): Managing surprise and discontinuity: strategic response to weak signals. Brussels.

Understanding change

CHANGE and Main Driver of Change
(political, economic, social, environmental, technological)

MEGA TRENDS - - - - - - - **MACRO TREND**

A large social, economic, political, environmental or technical change that is slow to form, but will fundamentally effect everything else.

MICRO TREND

First concrete signs of emerging trend movements

Is an observable change that is moving in a specific direction

Download: https://www.itonics-innovation.com/weak-signals-hypes-trends-lp   19

Understanding change: example

Area of Change: Business & Economy
Driver of Change: Change in Consumer Behaviour

MEGA TRENDS
Individualism

MACRO TREND
Sharing Economy

A large social, economic, political, environmental or technical change that is slow to form, but will fundamentally effect everything else.

MICRO TREND
Car2Go

First concrete signs of emerging trend movements

Is an observable change that is moving in a specific direction

Trend classification

	Megatrends	Macrotrends	Microtrends
Description	Major sociological, economic, political, environmental or technological changes	Observable changes pointing into a specific direction	First concrete signs of emerging trends
Effect duration	25 - 30 years	5 - 10 years	3 - 5 years
Scope	Impacts all walks of life worldwide	Widespread, but do not necessarily influence all stakeholders and regions	Frequently limited to certain regions and markets
Examples	Urbanization Climate change Digitization Individualization	Shoppertainment Quantified self Collaborative consumption Cyber crime	Bicycle culture Snackables Home robots Mobile recruitment

(Macro) trends

Sharing Economy

Improving

↗ TREND

Published

The Sharing Economy is a trade model that sees consumers, businesses and organizations rent, lease or borrow products and services rather than buying or owning them. This unlocks the value of assets by making them easily accessible to others who need them. While sharing assets is not new, improvements in technology such as smartphones have made the process more efficient. Diverse demographics will add to the growth of the sharing economy, while leading nations will be joined by emerging economies, leading to greater disruption of industries as the sharing economy seeks to reach its full potential.

`sharing economy` `airbnb` `didi chuxing`

Slow Living

Emerging

↗ TREND

Published

Slow living is a choice that some are making to disconnect from the fast-paced life that surrounds them. This means recognizing the negative effects that fast food, fast living, instant gratification and over reliance on modern technology is having on the health of people and the environment. Slow living is seen as the antidote to the hectic pace of modern life. Proponents of this trend observe personal health and time benefits, while slow living also supports sustainability and environmental concerns.

`slow living` `blue zones` `wyndham grand`

Zero Waste

Improving

↗ TREND

Published

Zero waste is a social and environmentally focused movement that encourages the reduction of waste in homes and businesses, thereby avoiding the need for the use of harmful practices, such as dumping waste at a landfill or infecting the oceans with plastic waste. Proponents of the zero waste lifestyle are adjusting their consumer habits by buying in bulk or buying fresh produce, in the aim of avoiding the use of packaging. New zero waste businesses are supporting the movement, while younger consumers are using their voice and social media platforms to demand action from big brands and businesses. Industries will need to adjust if they want to meet the expectations of younger consumers.

`repsol` `hanesbrands` `kinship`

Data Ownership

Emerging

↗ TREND

Published

The personal data industry is booming because consumers no longer trust corporates or governments to treat their private online data with the necessary diligence and responsibility for privacy. The demand for personal ownership of or financial compensation for the data that individuals generate daily using online platforms and social networks is growing. In the past, online platforms earned most of their revenue by selling user-generated data to advertisers. In the future, we will see more and more equitable distribution of these revenues to the data creators at the very least, or even full ownership and control to decide how their data is used.

`data ownership` `apple` `silicon valley`

Inspirations & signals

Improving

📈 TREND

Published

Sharing Economy

The Sharing Economy is a trade model that sees consumers, businesses and organizations rent, lease or borrow products and services rather than buying or owning them. This unlocks the value of assets by making them easily accessible to others who need them. While sharing assets is not new, improvements in technology such as smartphones have made the process more efficient. Diverse demographics will add to the growth of the sharing economy, while leading nations will be joined by emerging economies, leading to greater disruption of industries as the sharing economy seeks to reach its full potential.

🏷 | sharing economy | airbnb | didi chuxing |

Trends

Inspirations

INSPIRATION

Published

Mercedes-Benz working on new ride-share app with self-driving cars

Mercedes-Benz has teamed up with German-based engineering firm Bosch to develop a new mobile ride-share app that uses automated Mercedes-Benz S-Class vehicles as transportation. A pilot project for the app just launched in San Jose, California. The cars, while automated, won't be completely driverless. The company said they will be monitored by a safety driver.

🏷 | mercedes-benz | ride-sharing |
| sharing economy |

🔗 foxbusiness.com

INSPIRATION

Published

The single mums who live together on 'mommunes'

Roommates with Kids is a co-living that connects single parents looking to share housing. At least 70% of the 6,500 members at Roommates with Kids are single mothers. The company taps into the 'mommunes' market, a play on the word 'communes'—a trend of changing living situations as the traditional nuclear family structure evolves.

🏷 | roommates with kids |
| single parents | mommunes |

🔗 bbc.com

23

3. Researching trends

Identification of relevant trends for the individual challenges

Where to spot trends?

| Scientific articles	Patents	Web sources	Startups
▪ SciFinder ▪ Scopus ▪ Science Direct ▪ Wiley Online Library	▪ Thomson Innovation ▪ Questel Orbit ▪ EPO ▪ USPTO ▪ JPO ▪ WIPO	▪ RSS Feeds ▪ Google Alerts & News ▪ Automated Web Crawler (~55 million websites)	▪ Craft.co ▪ Crunchbase ▪ (RSS Feeds)

APIs to databases for AI-enabled trend identification

ITONCS Innovation Suite

Browse trends, create new trend profiles, map connections and dependencies

https://id.itonics.io/register
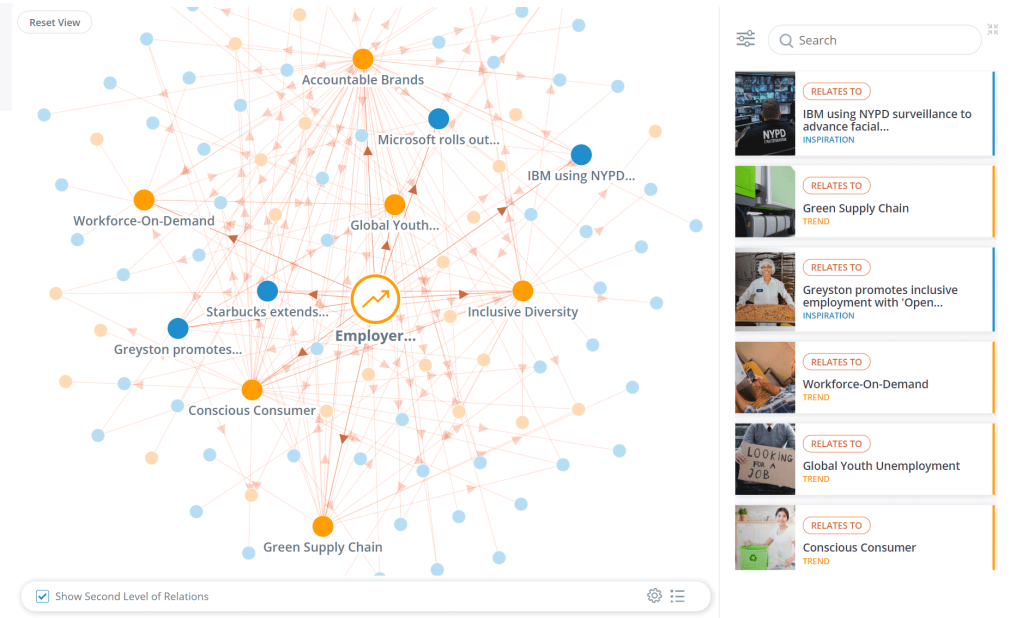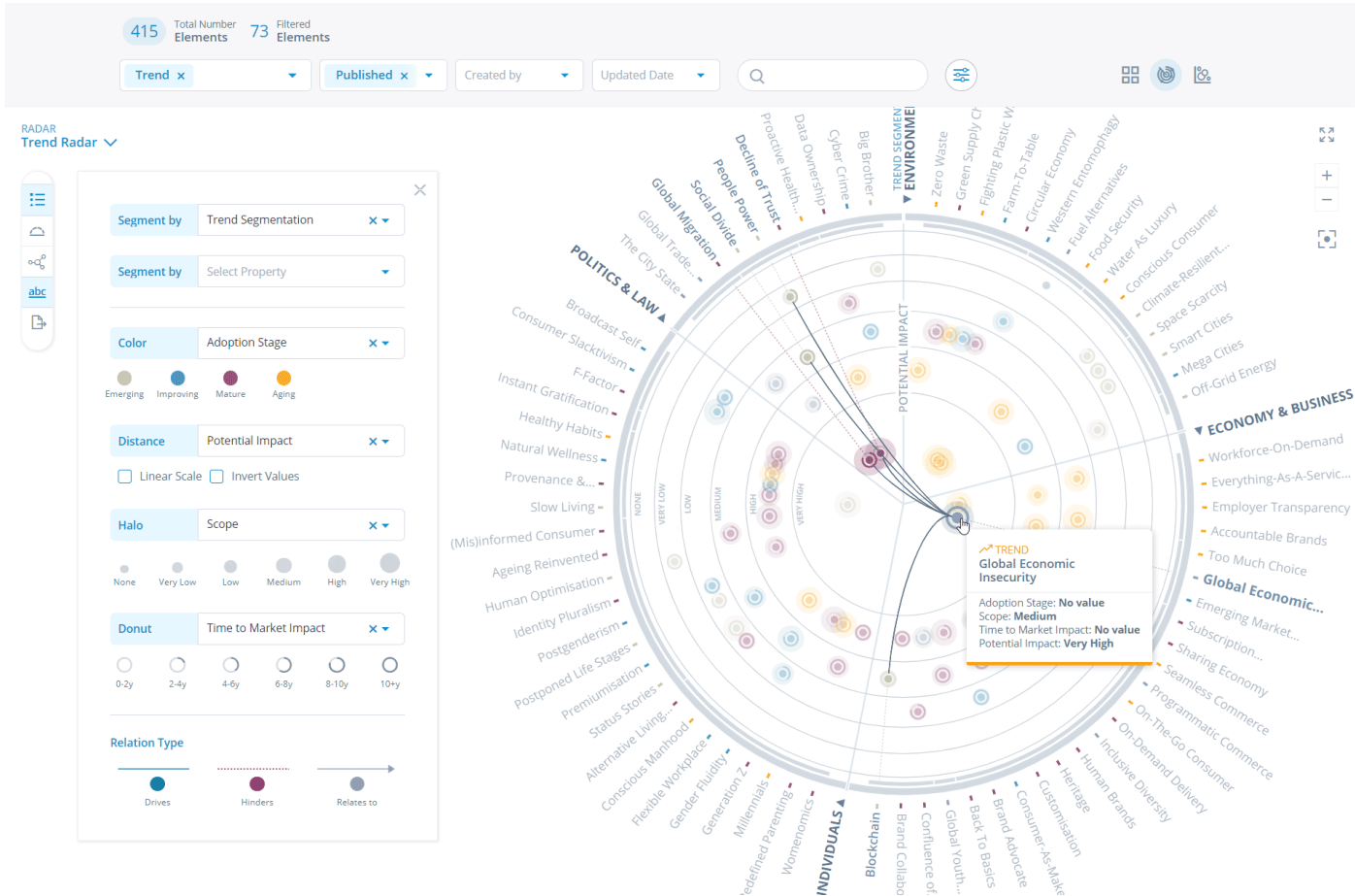
4. Evaluating trends

Evaluation of relevant trends
for the individual challenges.

Adding business context to trends

NO VALUE ON ITS OWN

CHANGE

MEGA TREND

TREND

UNLESS THERE IS ALIGNMENT

TOWARDS A BUSINESS CONTEXT
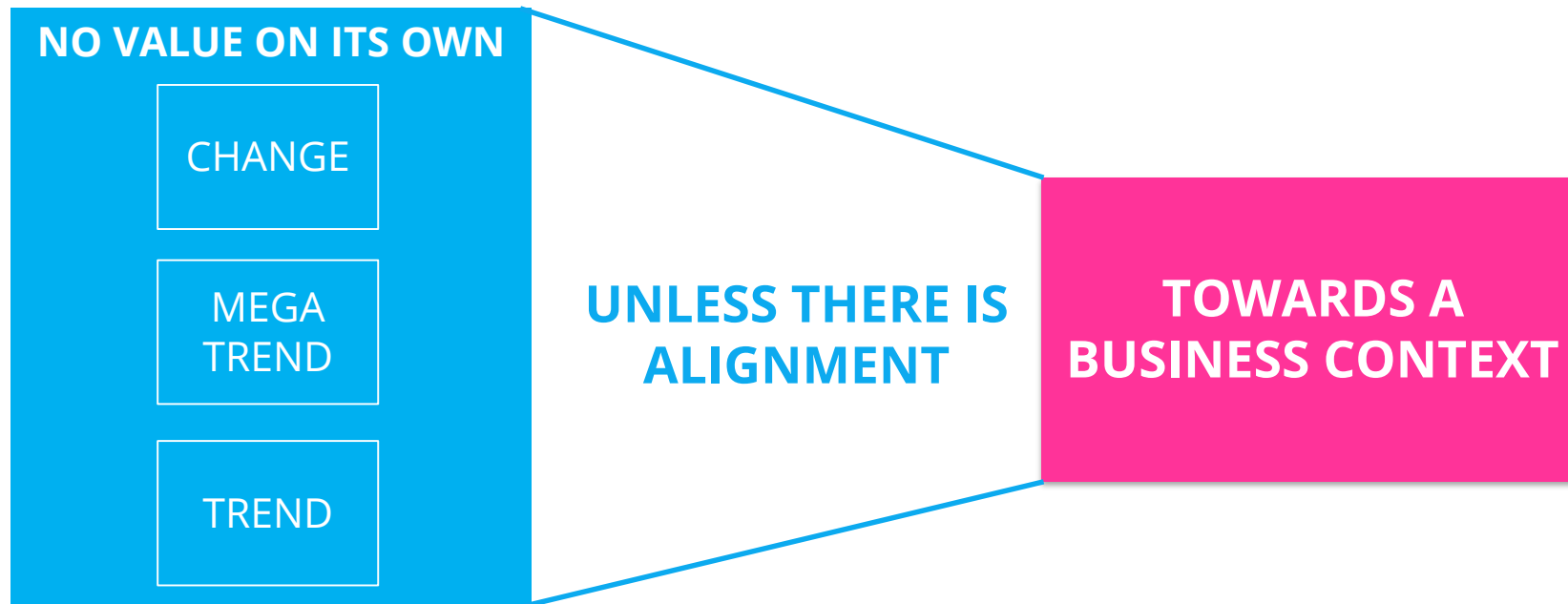
Trend evaluation

Objective evaluation criteria

❯ **Scope:** How far-reaching is the potential influence of this trend on the market?

❯ **Potential impact:** How high is the potential impact of this trend on the market?

❯ **Time to market impact:** When can this trend be expected to have a substantial impact on the market?

Individual evaluation criteria

❯ **Business relevance:** How relevant is this trend to your business?

❯ **Strategic fit:** How well does this trend fit into your organization's overall strategy?

❯ **Need for action:** How important is it that your organization takes action with regard to this trend?

Rating

Scope ⑦ ✕
Medium
None — Very High

Potential Impact ⑦ ✕
Low
None — Very High

Time to Market Impact ⑦ ✕
8-10y
0-2y — 10+y

Business Relevance ⑦ ✕
Very Low
None — Very High

Strategic Fit ⑦ ✕
Medium
None — Very High

Need for Action ⑦ ✕
Very High
None — Very High

Cancel   Save

5. Discover innovation opportunities with the trend radar

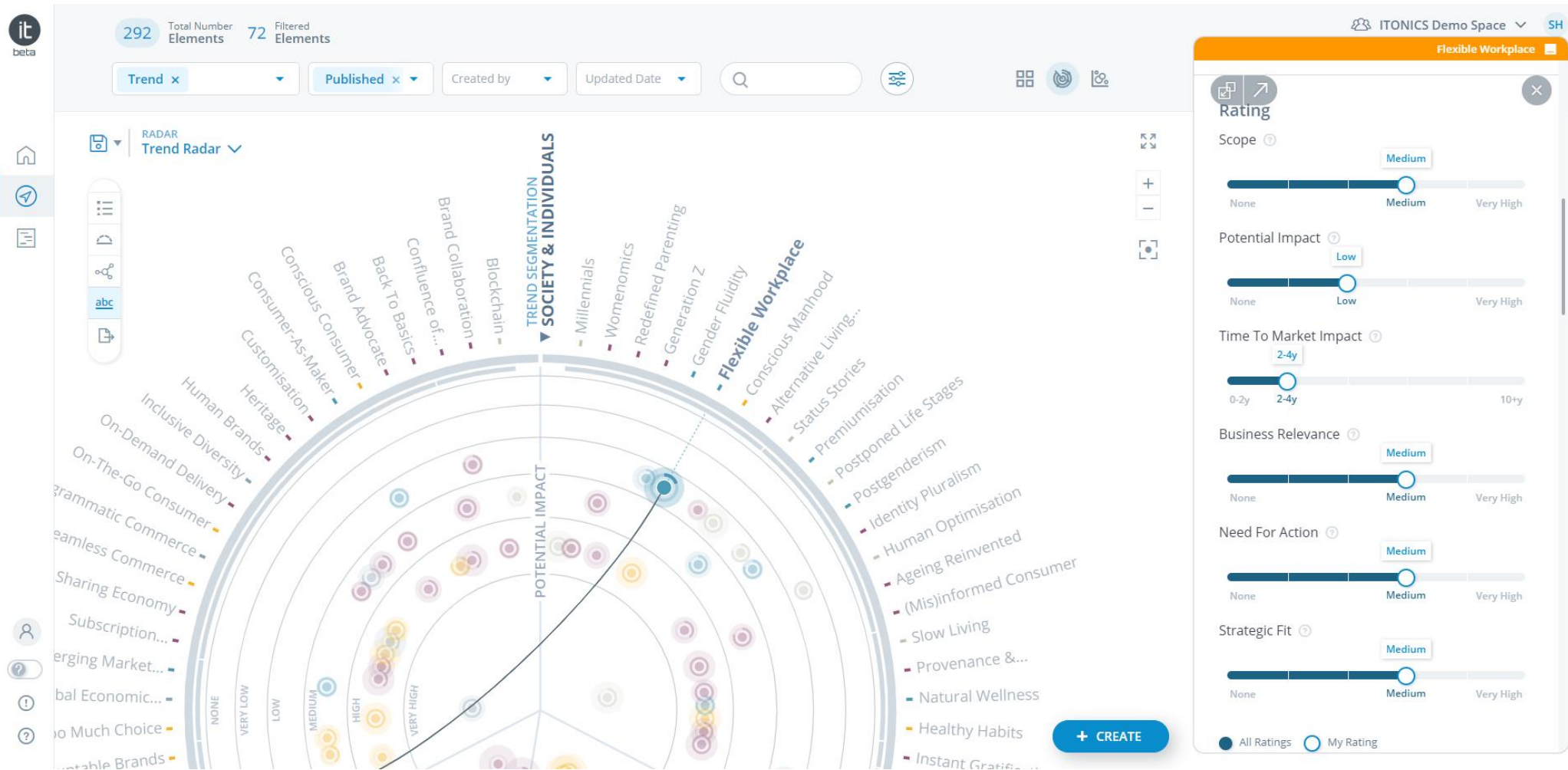Exploring trends, identifying and describing new fields of innovation

Innovation opportunities

"

Real opportunities are found when you connect all the dots between bits of diverse information you already know and put them together in a way that breaks a pattern.
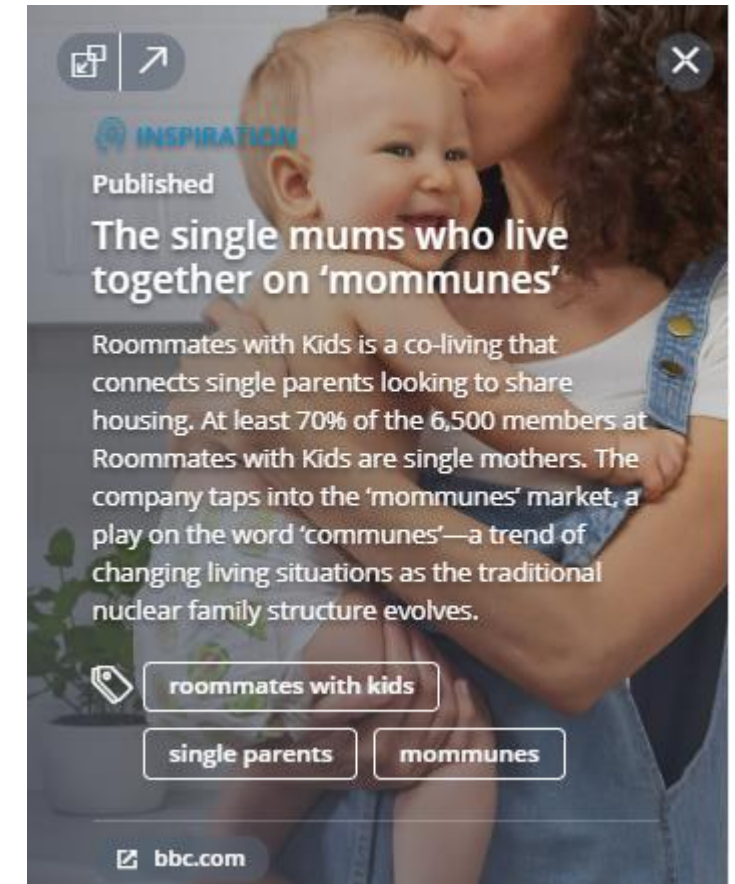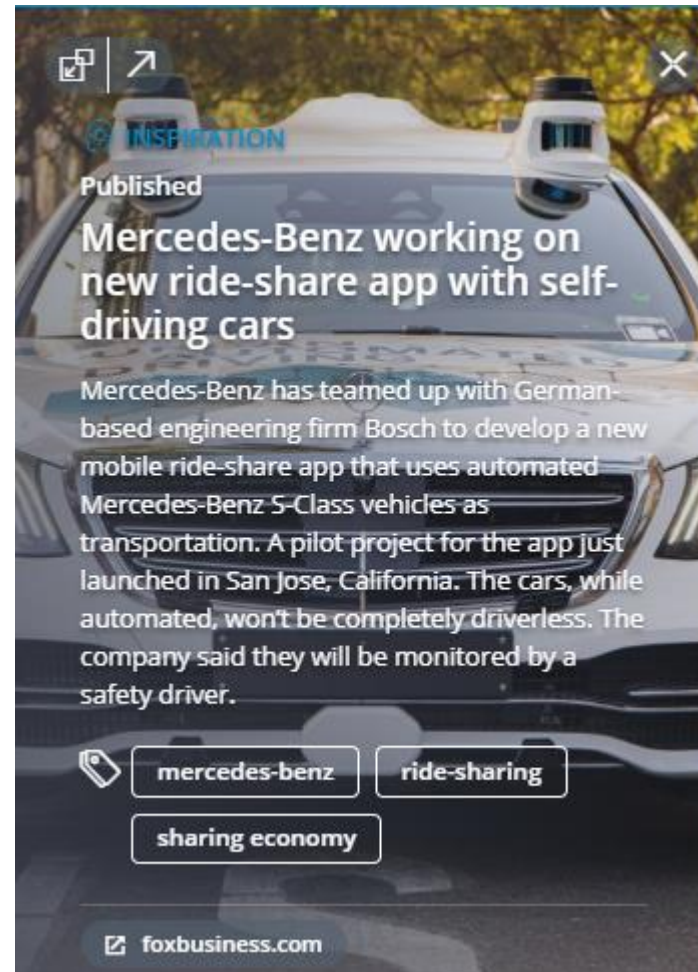
"

Connecting the dots

Hunting grounds

Get inspired for new opportunities

Places to look for inspirations

❯ Other industries
❯ Your industry in other countries
❯ Startups
❯ Your value chain

33

Individualisation

1

Single Living

On-The-Go Consumer

2

Snackables

Demographic Change

Premiumization

Subscription Consumption

Too much choice

Niche Consumption

Parents keep kids happy with subscription care packages

Image: Tech Crunch

Pijon is a delivery service that allows parents to send personalised care packages to their children in college once a month. Parents get peace of mind, while their kids get healthy snacks, beauty products and fun gifts - either from a male, female or gender neutral selection.

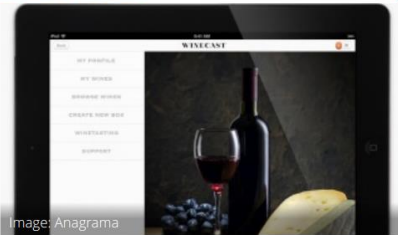### Winecast is a wine curating and delivery service

Image: Anagrama

After taking a 'taste test' that takes likes, dislikes, tastes and habits into account, Winecast presents the user with a personalized (and further customizable) selection of six wines to be sent every month for a fixed fee.

Tulip's single serve pre-filled wine glasses

Image: Packaging of the world

The Tulip wine glasses are pre filled and sealed with a peel-off foil lid. The wine is sealed using patented technology to maintain wine quality and to give a shelf life of over 1 year.

4

Hello Fresh for Cocktails

3

Portable nano-sized wine bottle with a clip-on cup

Image: google

New Zealand winery Sileni Estates has created an unbreakable packaging for Sileni Nano, a new single-serve wine product. Sileni Nano comes in a 100% recyclable, all-in-one wine bottle with a clip-on plastic drinking cup.

Three glasses of wine delivered monthly from VINEBOX

Image: Get Vine Box

VINEBOX is a newly launched wine club that guarantees its members three glasses of exclusive wine every month, from around the world. Without having to spend money on a full bottle, members can use their delivered vials.

Meal kit deliveries take the hassle out of meal planning

Image: Fast Company

Deciding what to make for supper can be the last thing you feel like doing after a long day. Fortunately, meal kit delivery services are popping up everywhere. In the USA startups like Just Add Cooking and Blue Apron deliver fresh, local ingredients along with recipes.

34

Opportunity space canvas

3 **Relevance**

❯ Why is this opportunity relevant for the identified target group?

❯ Which (hidden) needs does this opportunity space address?

❯ How certain is this opportunity

Innovation potential **4**

❯ Can we disrupt existing value chains or ecosystems by this opportunity?

❯ Can we enter new markets?

❯ Can we create entry barriers for future competitors?

❯ Can we create new business models in this opportunity space?

Opportunity Space No°

❯ Which (new) markets/ customer groups do you want to address?

❯ For whom are we creating value?

❯ Which trends inform the opportunity space?

❯ How do other businesses apply these trends?

2 **Target group**

Trends & inspirations **1**

Source: https://www.itonics-innovation.com/blog/spotting-innovation-opportunities

35

Selecting innovation opportunities

› **Capabilities to seize the opportunity**
  › Do we have the right people/knowledge?
  › Do we have the right processes in place?
  › Do we have the needed technology?
  › Do we have the needed financial resources?

› **Potential of the opportunity**
  › Can we create new business models in this opportunity space?
  › Are we addressing (new) markets/ customer groups?
  › Can we serve relevant hidden needs?
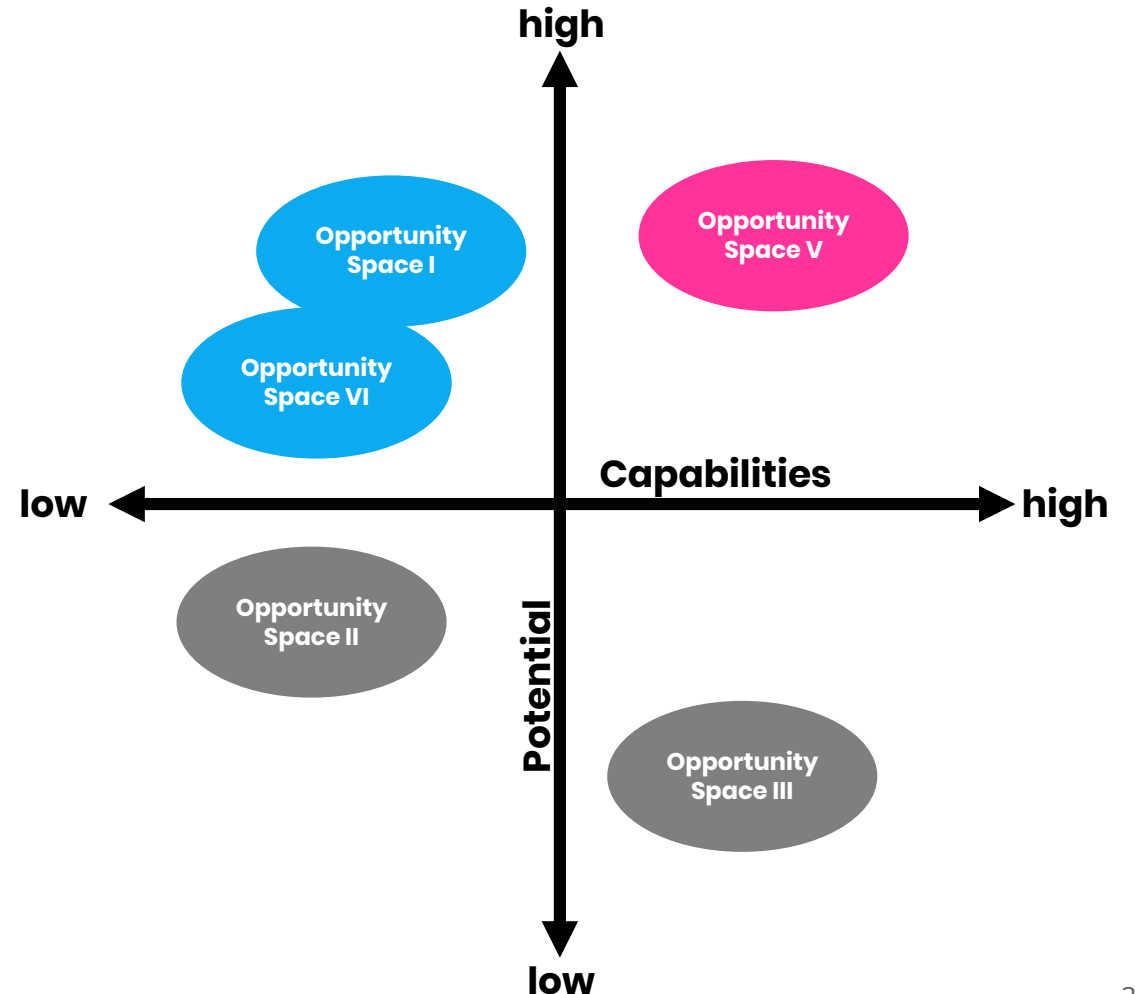
Opportunity Space: Example

Opportunity Space

Premium Mobility

A growing number of consumers is not interested in owning a car anymore. Especially millennials, who are now young professionals, do not value ownership any longer, but focus on access to mobility instead. This consumer group grew up with a variety of digital products that provide on-demand services. The same promptness and smoothness is expected when it comes to mobility and traveling. Time is valued very highly and therefore getting from one place to another should happen as quickly as possible. Moreover, on-demand mobility is expected to be available for things, too.

☆ Relevance

This opportunity is relevant to Daimler Financial Services, because the premium image of Mercedes Benz can be easily transferred to our mobility services. Many of the building blocks for a premium mobility service are given, but need to be connected to form one seamless service.

Key Question

Which premium mobility service can we offer to our customers within the next 8 years that foster a quick and convenient travel experience?

📈 Related Trends

Transport Sharing

› Sharing one's transportation vehicle - a car, bicycle, or even a private jet – has become increasingly popular. More and more platforms by carmakers, cities and innovative entrepreneurs are connecting car owners and drivers with individuals looking for a ride.

Connected Mobility

› Connected Mobility describes the sensorification of vehicles and urban areas. The merging of data gathered from vehicles, crowds and public transit systems with ride- and car sharing and other transportation services is leading to a far more pleasurable, cheaper, sustainable and convenient travel experience.

Too much choice

› Too much choice refers to consumers being overwhelmed with the increasing variety in products and services, particularly in retail. Although consumers like variety, too many options can negatively impact brands that derive value from ever-expanding product lines, as consumers may decline purchases altogether, or rather turn to word-of-mouth referrals.

📊 Potential

A seamless mobility service is an exclusive product. It helps our customers to get around quickly and differentiate themselves by having the most comfortable and fast mobility services right at their finger tips. Premium mobility services have the potential to become a new status symbol for young professionals.

👥 Target Group

We are targeting frequent business travelers, especially young professionals, who want to have access to mobility anywhere. Their lives are too complex and busy to worry about mobility. This group is ready to pay a premium price for such a service.
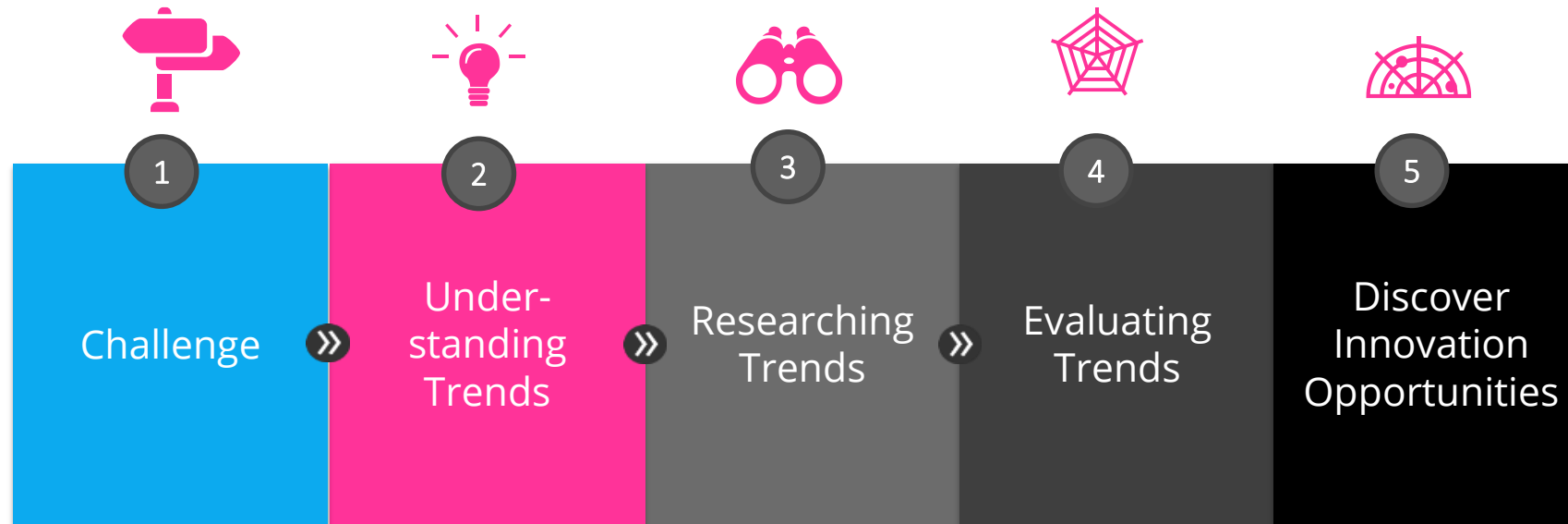
Case study

https://www.itonics-innovation.com/case-studies/how-dmk-group-established-a-high-performance-trend-management

Trend-driven innovation process

1	2	3	4	5
Challenge	Under-standing Trends	Researching Trends	Evaluating Trends	Discover Innovation Opportunities

Nürnberg

Emilienstr. 9
D-90489 Nuremberg

+49 911 600 60 550

Berlin

Wallstr. 15a
D-10179 Berlin

+49 30 57702200

Kathmandu

Hanumansthan, Anamnagar
Kathmandu 44600, Nepal

+977 1 4239294

New York City

80 Pine Street, Floor 24
New York, NY 10005

+1 212 7523011

contact@itonics-innovation.com   itonics-innovation.com

itonics
shaping innovation