

SMARTORG®

Placing Big Bets without Burning Bridges

David Matheson, SmartOrg
Udi Chatow, Applied Materials
10 August 2023





The average life span of innovation leaders in an organization is short.

Why?

David Matheson



Decades working with companies.

From Nuclear Waste Cleanup to Movie Production.

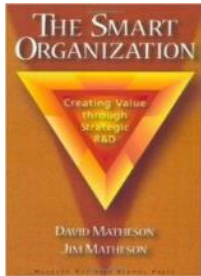
Founder of SmartOrg, Inc.

President and CEO

Connecting Innovation and Finance



SMARTORG®



Author of The Smart Organization.

Benchmarking hundreds of companies.

Innovation & Portfolio Thought Leader

Instructor, Fellow and Vice President of the Society for Decision Professionals



Three keys to placing bets without burning bridges.

Developed Innovation Navigator approach in conjunction with a cohort of companies over the last few years:

ExxonMobil



IOWA STATE UNIVERSITY

HM • CLAUSE

Carnegie Mellon University



3M

ŌURA

Finding Innovation Blind Spots

Speaking the language of finance

Derisking effectively

Udi Chatow

Born in Israel

Studied and implemented Physics and Business (TAU and Kelloggs)

Tackling Innovation and Incubation challenges for over 20 years in startups and corporate (HP and Applied Materials)

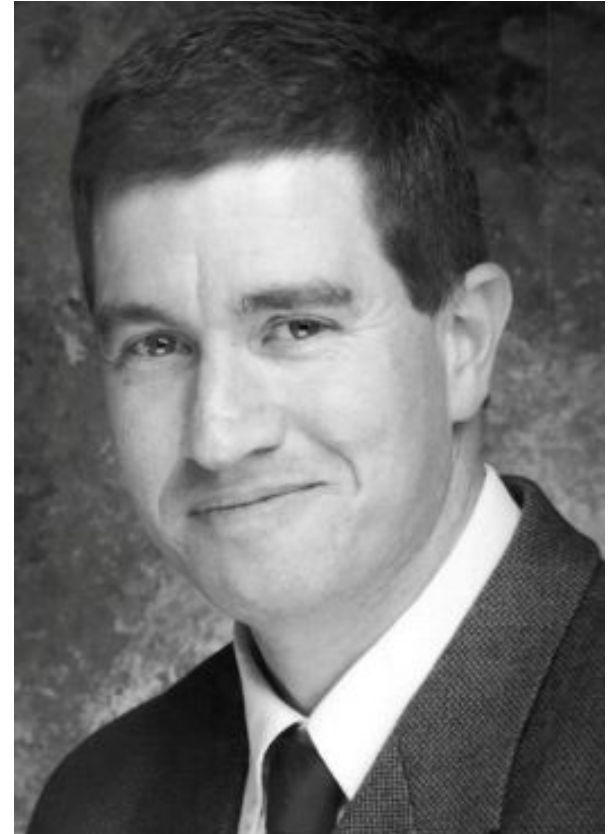
Passionate about taking complex technologies and executing go to market plans with high customer success

AI and SW solutions are a growing part of our world

How do we bring this to our customers?

How do we prove we are on the right track before we spend too much money on the wrong one?

How do we consolidate and mitigate the concerns and risks internal leaders may have?



Poll – What is your innovation role?

Innovation Executive – Oversight, accountability for growth

Innovation Director – Prosecuting an area of importance to the organization

Innovator – Running projects, doing tasks to accomplish innovation work

Corporate wannabe – Have an idea in your company, trying to find traction

Innovation Coach – In an organization helping Innovators get their efforts done or running an innovation process.

Consultant / vendor – I support the innovation community with a product or service

Other



Welcome to your new Director of Innovation Role!

Are you more than a corporate pet?



A close-up photograph of Tom Cruise, looking intensely at the camera while holding a black mobile phone to his ear. His mouth is wide open in a shout, and his facial expression is one of extreme stress or anger. The background is blurred, suggesting an outdoor setting with bright light.

**SHOW
ME THE
MONEY!**

Poll: Which are the biggest issues for you in placing innovation bets (pick 3)?

Building momentum for promising new ideas

Managing executives' expectations

Dealing with late-stage surprises

Prioritizing innovation projects

Overcome internal skepticism

Focusing on the most important issues

Other (put in chat)



Finding Innovation Blind Spots
Speaking the language of finance
Derisking effectively

Finding innovation blind spots

What big issue are you not attending to?

OBJECTS IN MIRROR ARE
CLOSER THAN THEY APPEAR

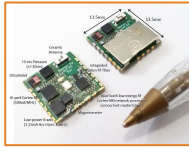
World's Stylish Smartwatch Platform

HP

Strengths:



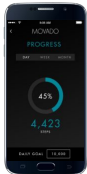
System-Level
Engineering Expertise



Inkjet & PC
Miniaturization



Global scale
low-cost supply
chain



Device as a
Service Infrastructure



Inspiring Historical Success
(first calculator watch in 1977)

Smartwatch Style

Engineered by HP



Core Business Idea:

- Create a Smartwatch platform
- Others implement their designs

HP's foray into Smart Watches canceled because team fails to see the main issue.

Executive Question

Action / Result

Effectiveness

Is there a there there?



minimum
Viable
Product

5k Units
\$1.2M



Is this a scalable business for HP?



Minimum
Awesome
Product

15k Units
\$8.1M



How to we drive profitable global scale?

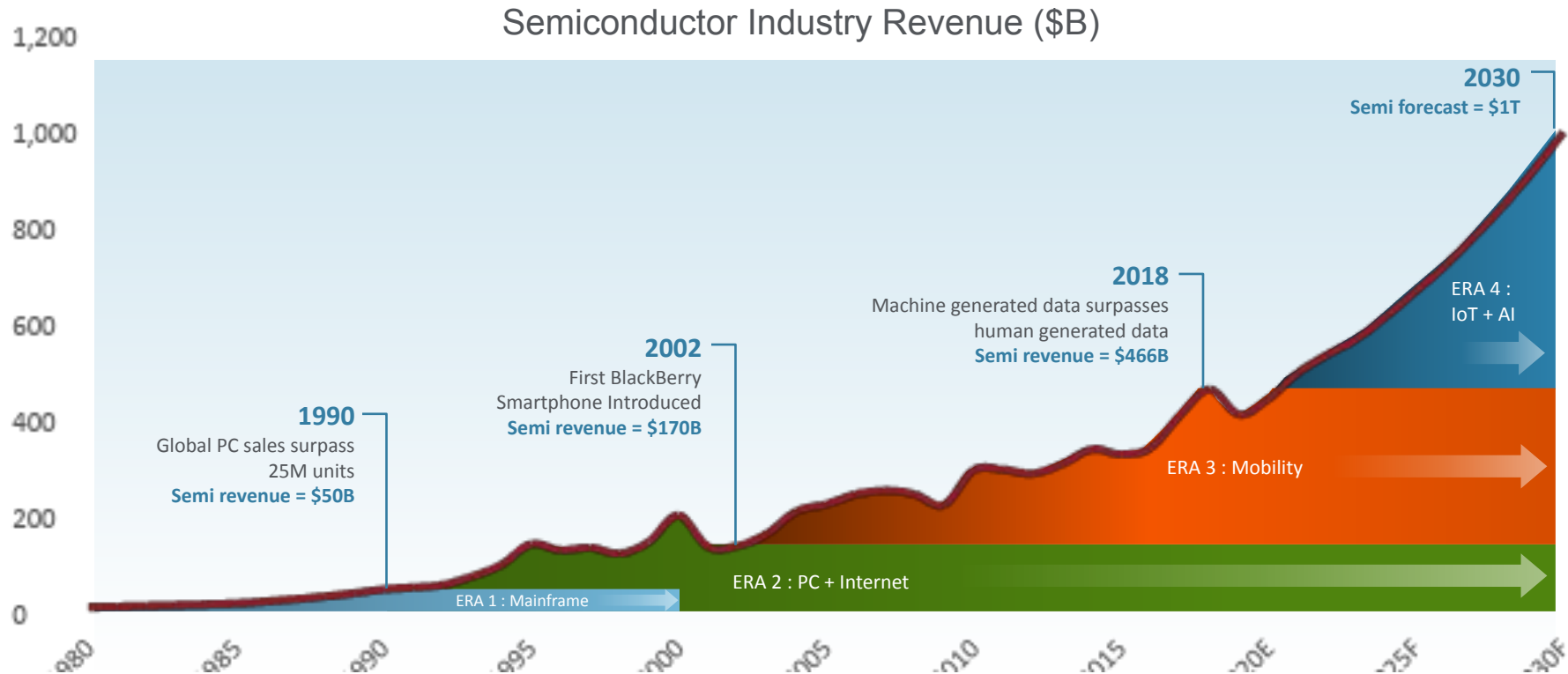


Customer
Development

80k Units
\$12M



How does a hardware-oriented Chip Fabrication Tool Manufacturer ride the next wave when it is driven in large part by software?



Source: SIA, Applied Materials - SMI

15 | Applied Materials External

AI Era is the 4th and Biggest Age of Computing

Accelerating Scaling Through Materials Engineering



Extend the technology roadmap with new materials, enabling new structures and devices

Solve customers' complex technical challenges with co-optimized and Integrated Materials Solutions™ (IMS™)

Enable faster learning and breakthrough technologies through our state-of-the-art labs and R&D centers

Understanding concerns to drive change and innovation

- Change is especially difficult in big companies – it takes focused energy to navigate the ship from current course
- Continuous alignment and buy-in from stakeholders is a must
- Put all the issues on the table, discuss and tackle the most important topics head on
- What do I need to focus on as the innovator versus what the core organization can handle?
- How I do it → bring in a 3rd party to facilitate if needed or use a tool like iNav to create structured issue raising and brainstorming with key stakeholders involved
- Don't be afraid to discuss gaps and make sure you capture them.. Examples to follow

Structured Brainstorming – What are people concerned about?

Survey Stakeholder Groups

- In our case with business managers leading cross company efforts

Use Canvas(es) to ensure coverage

- **DFV:**

Desirability

- Importance of Job-to-be Done
- Value Proposition
- Speed of Action

Feasibility

- Technically Possible
- Access Resources
- Achieve Scale

Viability

- Hit Performance Requirements
- Can we build it
- Access Resources

- **SWOT:**

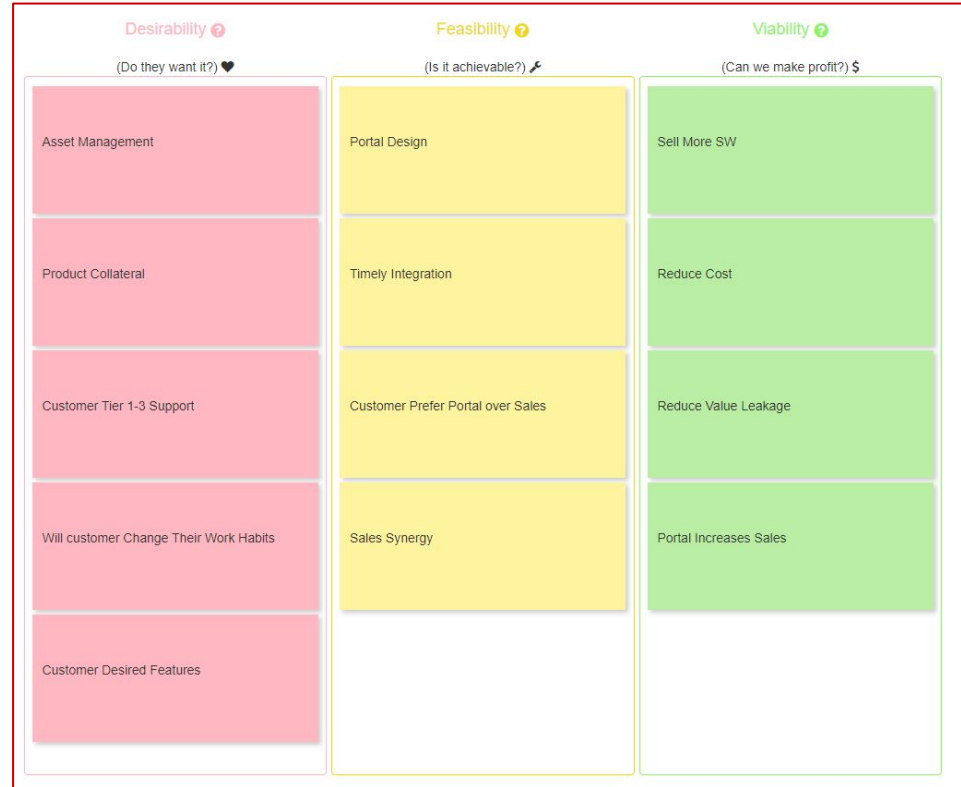
Strengths

Weaknesses

Opportunities

Threats

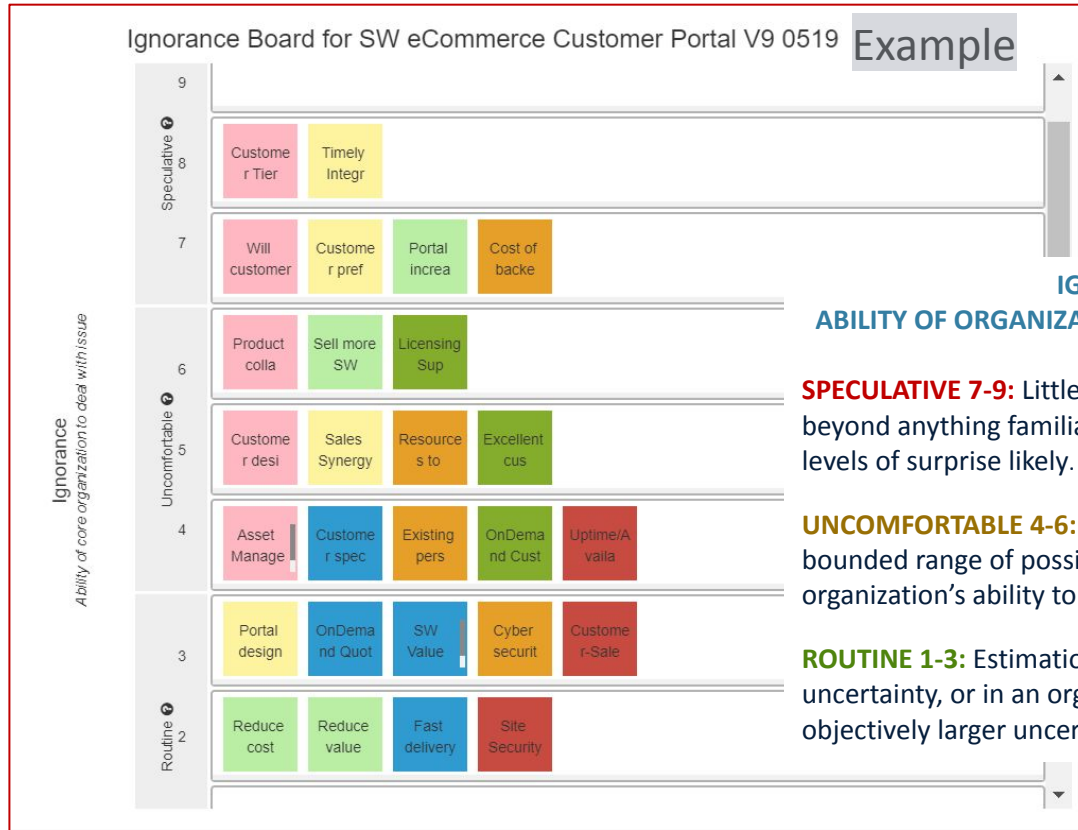
DFV Canvas



Finding blind spots – what is Speculative?

- Scoring
- Discussing
- Capturing gaps

- With stakeholders
- In our case with business managers leading cross company efforts



IGNORANCE

ABILITY OF ORGANIZATION TO DEAL WITH AN ISSUE

SPECULATIVE 7-9: Little basis for this assumption. Well beyond anything familiar to the organization. High levels of surprise likely.

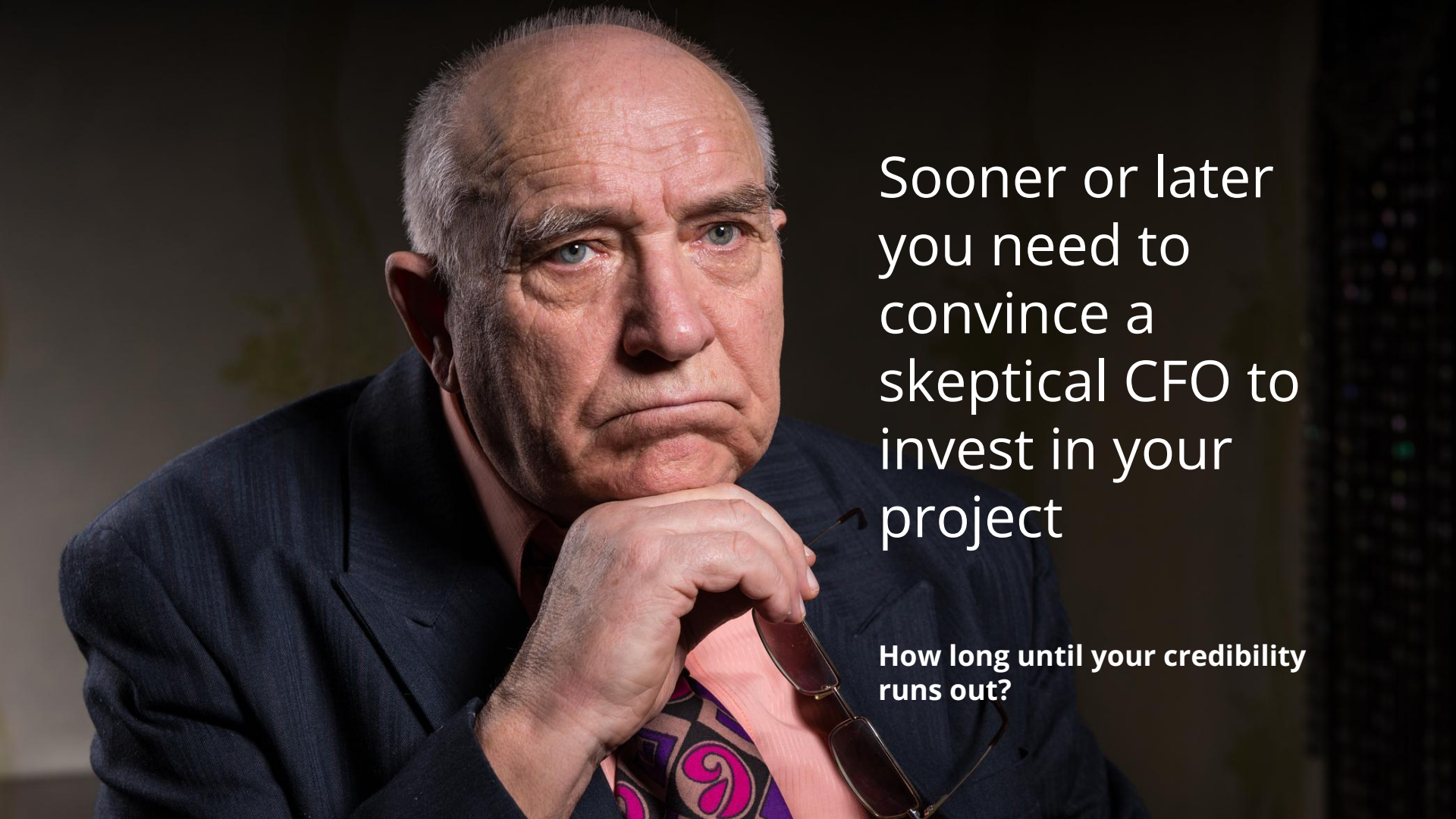
UNCOMFORTABLE 4-6: Large uncertainty, with bounded range of possible outcomes. Beyond scope of organization's ability to deal with routinely.

ROUTINE 1-3: Estimation error, small level of uncertainty, or in an organization's wheelhouse (even if objectively larger uncertainty)

Speaking the language of finance

What drives the upside?





Sooner or later
you need to
convince a
skeptical CFO to
invest in your
project

**How long until your credibility
runs out?**

How to win big with frequency-hopping radios?

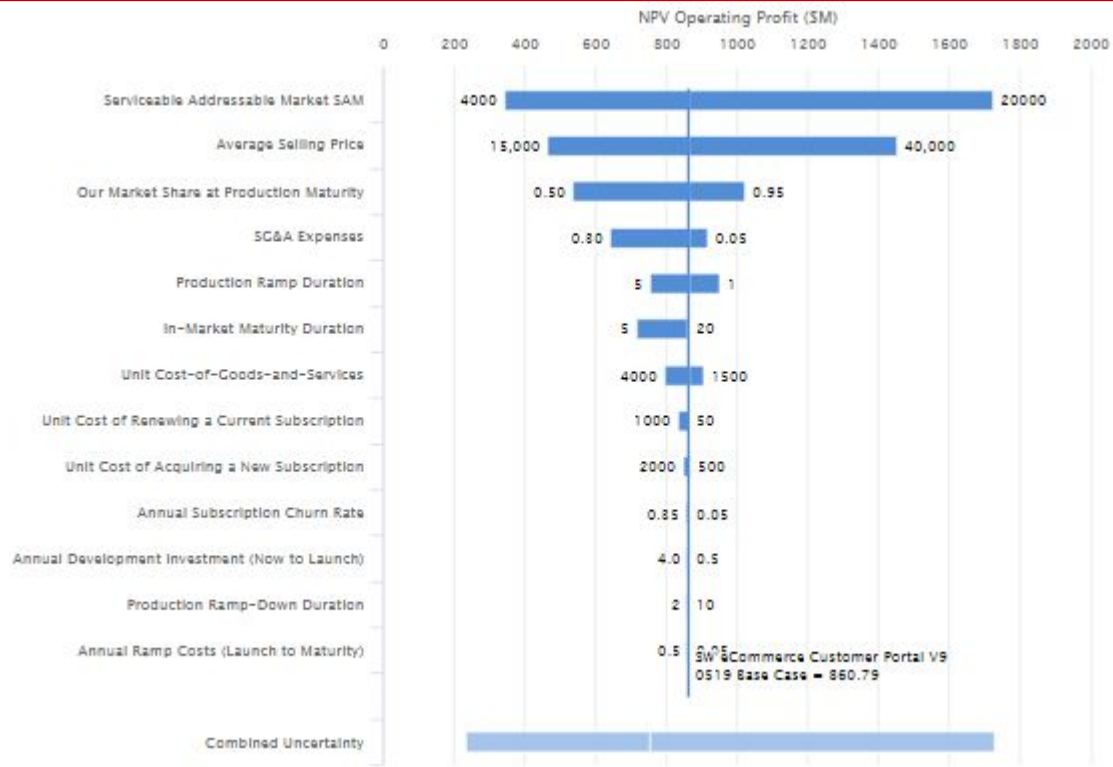


Translating to \$ for finance and budgets.

- Typical questions from finance:
 - » What is the ROI, what is the NPV?
 - » What can you do with 50% of the budget requested?
 - » What is the risk?
 - » Can you bring in more revenue faster with more budget?
- Get ahead of finance
 - » Get knowledgeable people in the room
 - » Work through upside and downside scenarios for key topics like market size, price, etc.
 - » Put into a business case and understand which assumptions matter most
- Tornado charts are a good way to present risks and upsides and the range of NPV

Tornado Chart: what we can learn from it and what matters most

- What are scenarios with the highest value or biggest range?
- Helps focus on the areas with biggest uncertainty
- Gives the different areas of effort a relative value
- Leads to an efficient discussion with finance on risk and return
- Update as we learn to show progress on financials.





Derisking effectively

What is your learning plan?

Effective derisking requires a learning plan based on addressing high *impact* issues.

Example

Execution Plan

High Impact Issue

Learning Plan

SmartWatches



- More designers & brands
- Build more watches
- Sell them

Can we control costs as we proliferate SKUs?



Frequency-Hopping Radios



- Pilot with Army Rangers to field test prototype

How to make our product standard?

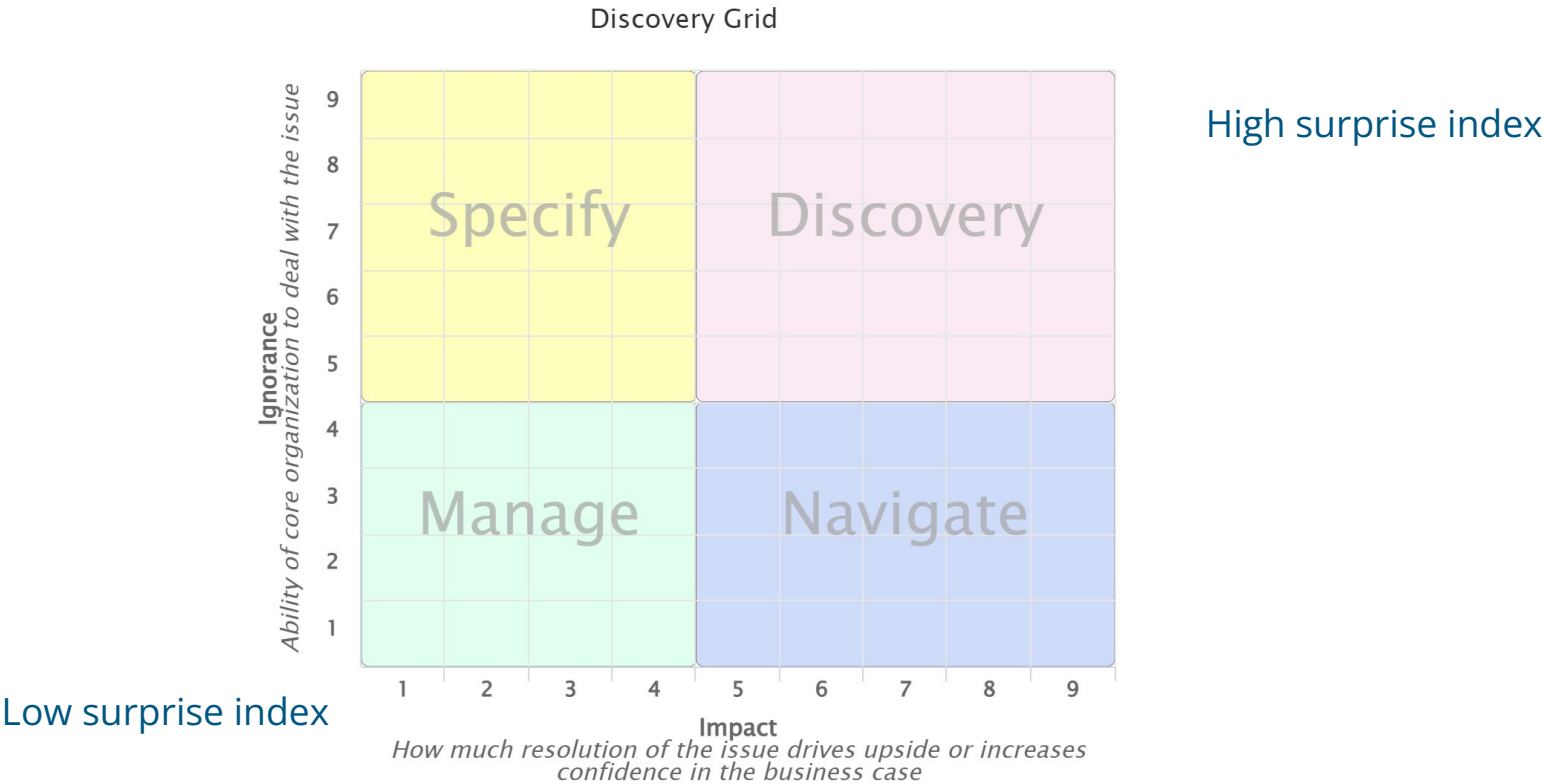
Test interest with vehicle manufacturers

High Impact = resolution of this issue dramatically improves confidence in the business case or its upside.

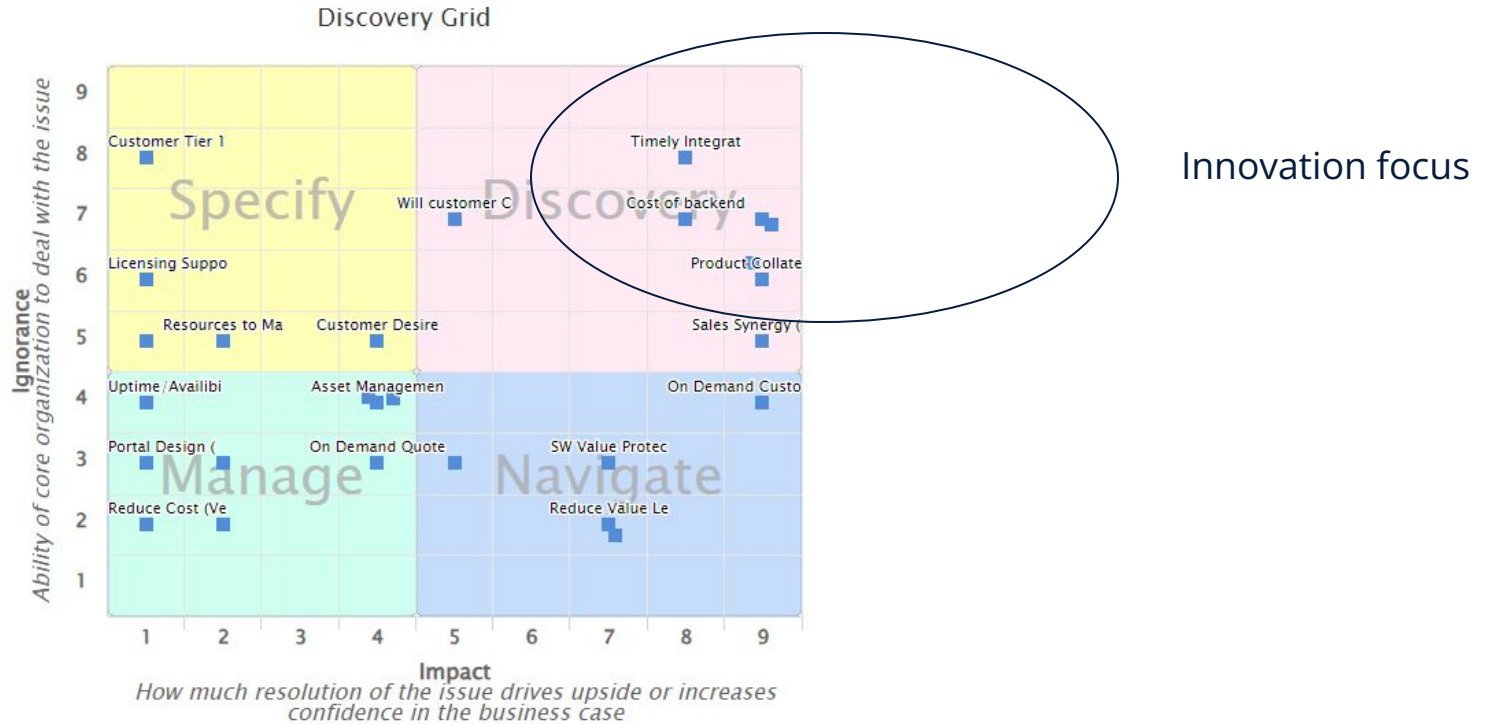
What do you need to learn before committing?

	Execution Plan	Learning Plan
Objective	Get it done	Figure it out
Deliver	Progress	Evidence
Focus	Tasks	Discovery Issues
Milestones	Progress Checkpoints	Pivot Decisions
Strategy	Align & Build Momentum	Pursue decisive experiments
Uncertainty	Eliminate / mitigate / avoid	Seek, explore
Measure	Budget and Schedule	Reduce Surprise Index

Aligning on Discovery Zone issues: where surprise is likely and it matters to the business case.

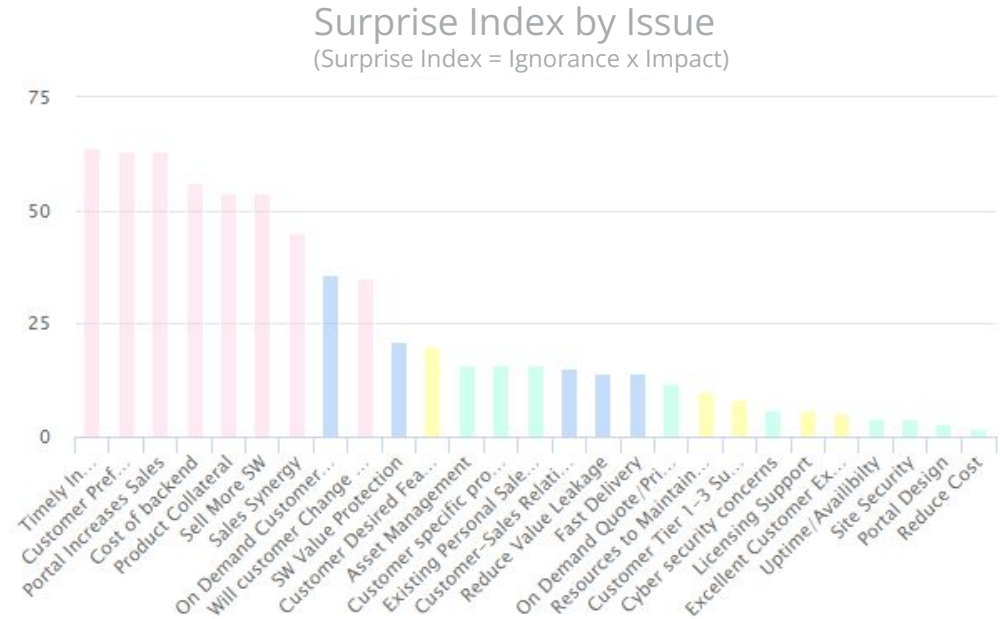


Finding the issues most needing derisking – clear big questions early.



Create a Learning Plan to Maximize Revenue & Minimize Risk

- Focus on the riskiest elements first
- What 2-3 things have the biggest effect on outcome
- Create a learning plan to answer the biggest risks / biggest upsides - before the big program expenses kick in
- Stick to the program plan with review milestones – pivot as needed and ASAP



Plan pivot meetings based on results of the experiments.

- Don't assume you will charge ahead with momentum, plan pivot points
- After each sprint, update information (issues, tornado, etc.)
- Expect to change direction based on new insight about what creates the most value
- Sharing negative results proactively builds your credibility
- Positive results on upside and risk reduction will encourage finance to double down on the investment

The screenshot shows a 'Workspace' application interface. It is divided into two main sections: 'In Plan' and 'Backlog'. Each section contains a table with columns for Experiment, Issue, Issue Type, Readiness, Est. Cost \$K, and Duration Weeks. The 'In Plan' section has two rows, and the 'Backlog' section has seven rows. The 'Issue Type' column uses color coding: pink for 'Discovery' and blue for 'Navigate'.

Workspace						
In Plan						
Experiment	Issue	Issue Type	Readiness	Est. Cost \$K	Duration Weeks	Potential Complete
History Test	Portal increases sales	Discovery	63	20.17		6
OTC Automation Pilot	Cost of backend	Discovery	63	150.35		12

Backlog						
Experiment	Issue	Issue Type	Readiness	Est. Cost \$K	Duration Weeks	
Will they come	Will customer change their work habits	Discovery	56	10.12		4
Creating customer pull	Product collateral	Discovery	54	10.23		8
AMAT sales synergy	Sales Synergy	Discovery	45	20.35		12
SW Asset Management	Asset Management	Navigate	36	30.35		12
Customer feedback	Customer prefer portal over sales	Discovery	35	20.12		4
Motivating features	Customer desired features	Discovery	25	100.35		12

Report Options

Poll: Which methods will most help you place big best without burning bridges?

Finding your innovation blindspots: Issues and Ignorance

Speaking the Language of Finance: Tornado Diagram

Derisking Effectively: Learning Plan

Discussion – put questions in chat



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