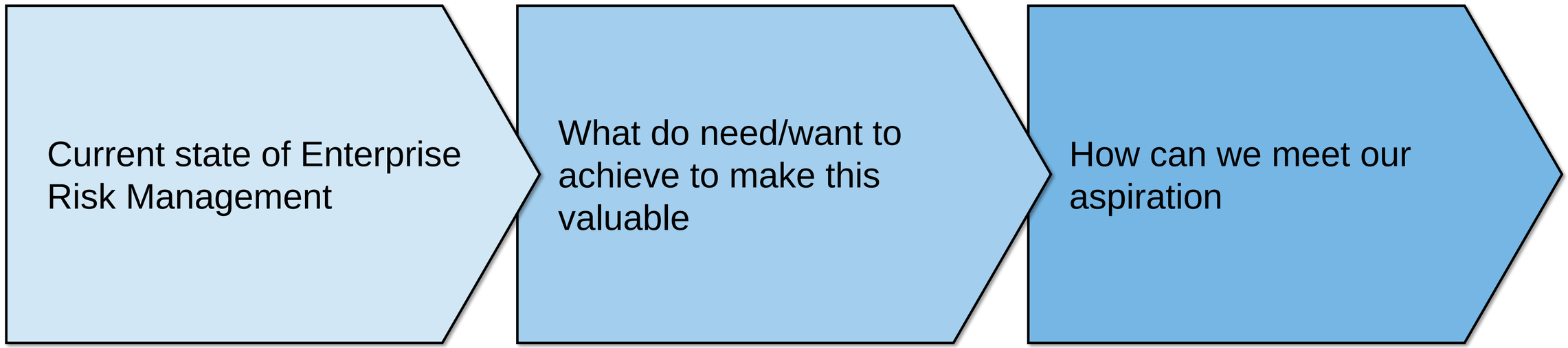
How to leverage a risk register as a valuable performance tool

Hans Læssøe

RISK AWARENESS WEEK 2022

Agenda


Current state of Enterprise Risk Management
What do need/want to achieve to make this valuable
How can we meet our aspiration

Current State of Enterprise Risk Management

- **Many companies have a systematic approach to ERM**
  - Based on a defined and standalone process
  - Executed with a defined frequency
  - Collect data in some standalone database/system
  - Provides a specific standalone ERM report
  - Drives/supports actions taken on specific risks

- **The approach is often not very helpful to management**
  - Risk focused/centric
  - Not linked to performance
  - Not linked to nor applied for business decisions

- **Cynically, it can be** (and has been) **described as "Enterprise List Management"**

If your ERM register looks like this …. I cannot help you

Risk Number	Name	Description of expected case	Likelihood	EBIT Impact	Owner	Actions Taken
1001	New competitor in key market	A strong new competitor emerges in a key market, and reduce our market share and revenue			CM	Close market monitoring Competitive strategy to be invoked
1002	Vendor disruption	A key vendor is unable to [illegible]ver, and halts manufacturing for 4 we[illegible]				
1003	Strike	Main facility hamper[illegible] over a period of 2[illegible] weeks. Union agree[illegible] renegitiation[illegible]				
1006	Chinese market close-down	For political reason[illegible] market is[illegible]				
1007	Reputational revenue loss	Being caught on bad b[illegible]				
1007	Reputational fine	We are fined based on bel[illegible] lour				
1008	Key component shortage	A key component cannot be[illegible] 6 week halt of manufacturin[illegible]				
1009	Labour cost increase	Based on negitiations, l[illegible] budgeted level				
1011	Price competition	Significant pri[illegible] lower [illegible]				
1012	Material transport stalled	Shipment from[illegible] stalled, leading to a 2[illegible] week loss of capa[illegible]				
1012	Shipment costs increase	Shipment capacity shortage leads to 20% higher shipment prices/costs				
1015	Overhead overload	Organisational overload leads to added fixed costs			FO	Change load monitoring

Before you even get started – you have to switch from qualitative to quantitative – which means:

- All likelihoods to be defined as either percentage of likelihood it happens within the timeframe you look at (e.g. 3%) OR as a frequency with which it may/will happen (e.g. 0,03)
- All impacts must be described as a value in your performance e.g. money if financial, CO_2 emission for environmental, etc.

However, most already have a risk register like this

Risk Number	Name	Description of expected case	Likelihood	EBIT Impact	Owner	Actions Taken
1001	New competitor in key market	A strong new competitor emerges in a key market, and reduce our market share and revenue	10%	180	CM	Close market monitoring Competitive strategy to be invoked
1002	Vendor disruption	A key vendor is unable to deliver, and halts manufacturing for 4 weeks	20%	96	PO	Close monitoring Duplication of key vendors
1003	Strike	Main facility hampered by strike over a period of 3 weeks. Union agreements up for renegitiation	10%	72	CO	Careful negotiations
1006	Chinese market close-down	For political reasons, the Chinese market is "closed"	5%	250	MO	Close monitoring
1007	Reputational revenue loss	Being caught on bad behaviour, we loose revenue	7%	100	RD	Ethics approach/training roll-out
1007	Reputational fine	We are fined based on being caught in bad behaviour	9%	100	RD	Legal monitoring Ethics approach/training roll-out
1008	Key component shortage	A key component cannot be procured, leading to a 6 week halt of manufacturing	3%	144	CO	Market monitoring Dual sourcing
1009	Labour cost increase	Based on negitiations, labour costs/rates exceed budgeted level	16%	40	MH	
1011	Price competition	Significant price competition leads to lower revenue	5%	150	PO	Close market monitoring Action plan to be invoked
1012	Material transport stalled	Shipment from vendor to us is stalled, leading to a 2 week loss of capacity	10%	48	LO	Inventory policy Duplication of transport
1012	Shipment costs increase	Shipment capacity shortage leads to 20% higher shipment prices/costs	8%	12	LO	Hedging/Long term collaboration
1015	Overhead overload	Organisational overload leads to added fixed costs	17%	100	FO	Change load monitoring

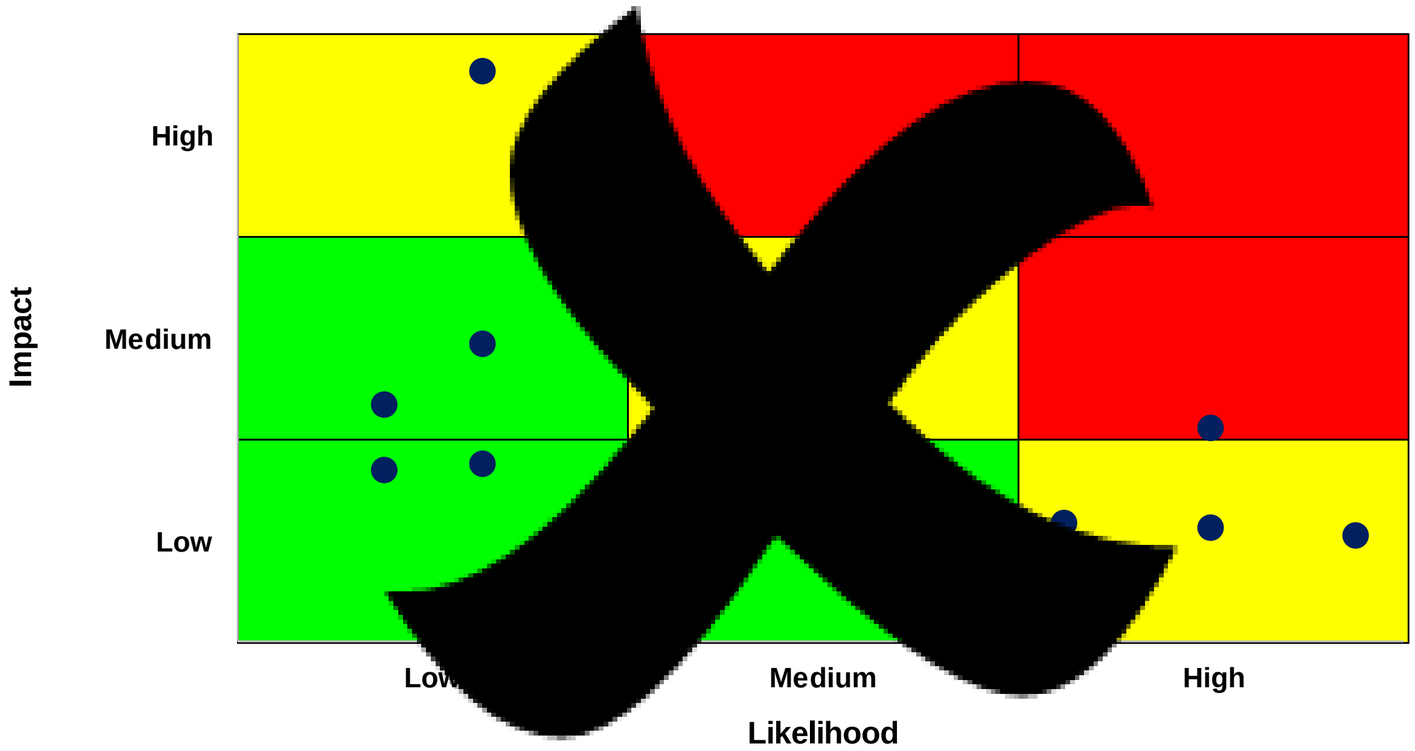
… leading to risk reports like this

- May be seen as a base for a management discussion

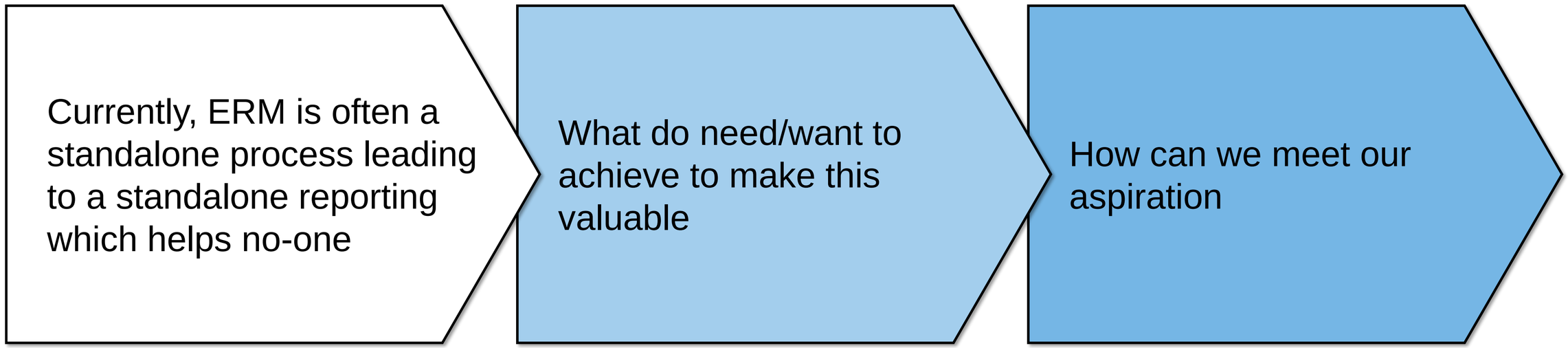
But has a series of shortcomings:

- Single point estimates
- Uncertainties not included
- Levers not included
- No consolidation
- No link to business performance

- In real life - USELESS



Agenda


Currently, ERM is often a standalone process leading to a standalone reporting which helps no-one
What do need/want to achieve to make this valuable
How can we meet our aspiration

Valuable risk management

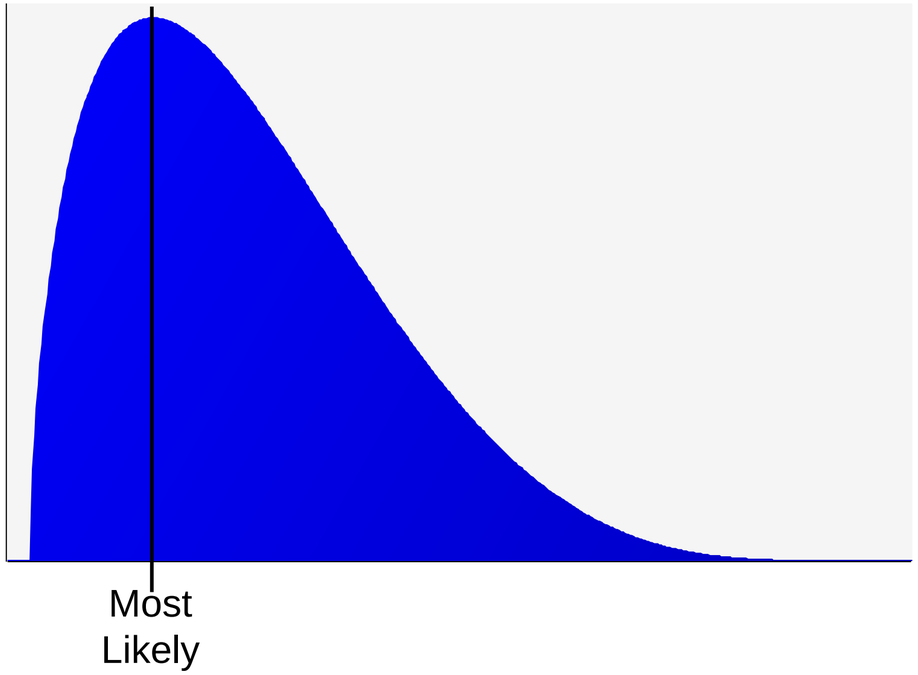
Purpose: Tangibly enhance business performance

It is not (just) about…	**but also very much about …**
• Managing risks	Enhance business performance
• Predict the future	Prepare for the future
• Eliminate or minimize risks	Taking risks … intelligently
• Insurance/compliance	Supporting bold decision making

“If everything is under control, you’re moving to slow” Mario Andretti

This changes the risk management approach

- **No more standalone … must be integrated**
  - Into business processes
  - With performance management
- **Must be comprehensive and valid**
  - Include uncertainties
  - Include levers
  - Based on facts/data
  - Outcome in ranges
- **Must support decision making**
  - Standardized decisions
  - Strategic decisions



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Currently, ERM is often a standalone process leading to a standalone reporting which helps no-one

To earn its license to operate, risk management must add business value

How can we meet our aspiration

So … we have to start all over ?

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No … we just enhance the insights we already have

- **Model your business performance**
  - This may be your Profit/Loss statement or any like metric
  - Keep it as simple as you can

- **Define outcomes as ranges/distributions**
  - Start simple – it helps more than you think
  - Enhance where valuable

- **Add uncertainties and levers**
  - Some things are known to happen – but effect is unknown
  - Good things happen too

- **Leverage Monte Carlo simulation**

Your P/L may be as simple as this

- No need to “rework” your entire budget
- These data easily available from Finance
- The variable cost share may need asking into – but they will know it

Item	Budget
Revenue/Demand	2.000
Variable costs - % of revenue	40%
Variable costs	800
Fixed Costs	1.000
Profit	**200**

Now your risk register may look like this

Risk Number	Type	Name	Description of expected case	Likelihood	Expected	Min	Exp	Max	MCS	Comment
1001	R	New competitor in key market	A strong new competitor emerges in a key market, and reduce our market share and revenue	10%	100	-1.000	-250	-63	0	Negative as it reduces sales
1002	C	Vendor disruption	A key vendor is unable to deliver, and halts manufacturing for 4 weeks	20%	90	-900	-225	-56	-517	Negative as it reduces capacity

- Risks have be categorized, here in four groups depending on what they affect:
  - R = revenue
  - C = delivery/supply capacity
  - V = variable costs
  - F = fixed costs
- The “expected” or most likely income has been recalculated to form a revenue number … by dividing with the range of flow through profit (= 1/variable cost share) and hence the 100 EBIT impact translates to 250 in lost revenue. Loss of revenue is negative, and hence the sign has changed
- The minimum and maximum outcomes have been defined using (a proxy) factor – in this case 4

Now your risk register may look like this

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1002	C	Vendor disruption	A key vendor is unable to deliver, and halts manufacturing for 4 weeks	20%	90	-900	-225	-56	-517	Negative as it reduces capacity
1003	C	Strike	Main facility hampered by strike over a period of 3 weeks. Union agreements up for renegitiation	10%	70	-700	-175	-44	0	Negative as it reduces capacity
1004	F	Currency Impact	Net currency impact	100%		-40	0	40	22	Assessment made based on hedging
1005	V	Material costs	Market shortage leads to change in material costs which cannot be relaved to sales price	100%		-2,5%	0,0%	5,0%	-0,4%	Assessment made & recalculated to become share of sales

- Uncertainties – which have 100% likelihood of happening – have been added
- Issues related to variable costs (e.g. 1005, Material costs) have been recalculated to be a percentage of revenue based on dividing with the target revenue (In this case, 2.000)
- Optionally you may mark these in light grey for easy identification

Now your risk register may look like this

Risk Number	Type	Name	Description of expected case	Likelihood	Expected	Min	Exp	Max	MCS	Comment
1001	R	New competitor in key market	A strong new competitor emerges in a key market, and reduce our market share and revenue	10%	100	-1.000	-250	-63	0	Negative as it reduces sales
1014	R	Competitor "drop-out"	A key competitor is bankrupt and drop out of the market, leaving a bigger market for us	3%	-50	31	125	500	0	Negative as this is a lever
1015	F	Overhead overload	Organisational overload leads to added fixed costs	10%	100	25	100	400	0	
1016	C	Productivity boost	Engineering project leads to a 5% of overall productivity and hence capacity	20%	-48	30	120	480	0	Assessment is negative as a lever Calculation increases capacity
1017	F	Project savings	Projects are, overall, unable to deliver targeted savings	20%	100	25	100	400	0	

- Levers/opportunities have been added as good things happen too
- These are “just like risks” – just good (and hence optionally marked in light green)
- Note, the 1016 risk, which was a negative risk (i.e. a lever) is now recalculated as a capacity issue to a revenue number – and seen as positive at it enhances “capacity”

Be very aware and validate your modelling on positive/negative

Now, your P/L looks like this

- General uncertainties added, as is the impact of the risks and levers related to demand
- Capacity situation added, including its risks and levers
- Recalculation of net revenue as we have to be able to supply to sell
- Variable costs measured in percentage of sales and the transferred into costs based on the simulated revenue

Item	Min	Budget	Max	MC
Revenue/Demand	1.900	2.000	2.300	1989
Demand uncertainty impact				457
Net Demand				**2.446**
Supply Capacity			2.500	2413
Supply uncertaint				0
Net supply capac				**2.413**
Capacity constraint				33
Likelihood of capacity constraint				24%
Net Revenue				**2.413**
Variable costs - % of revenue	38%	40%	43%	41%
Variable costs		800		984
Variable costs uncertainty impact				3
Gross Contribution		**1.200**		**1.426**
Fixed Costs	950	1.000	1.100	1017
Fixed cost uncertainty impact				-6
Profit		**200**		**415**

Total impact of risks and levers is calculated using the Excel "SUMIF" function

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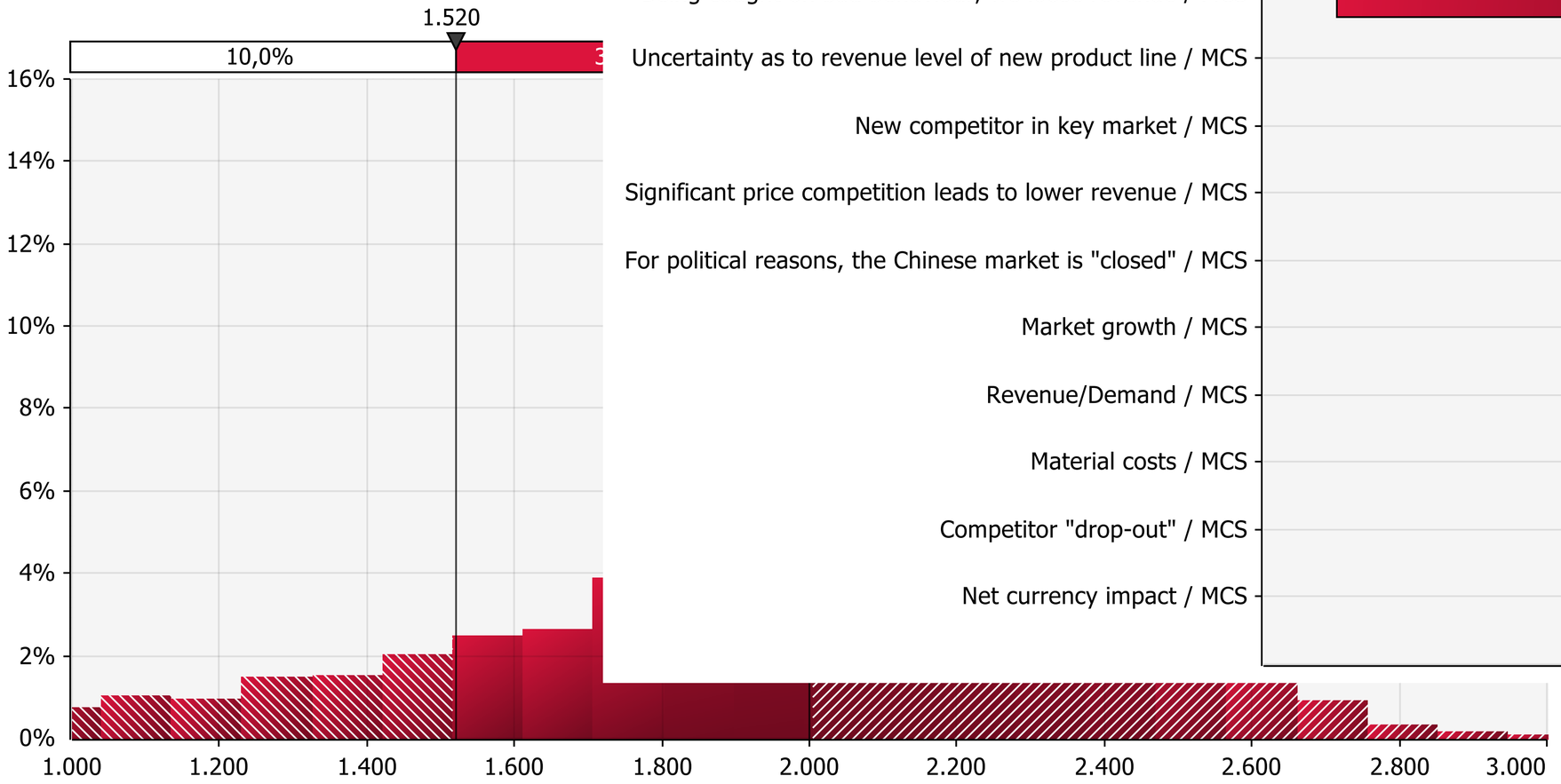
Simulating, now we can get valuable results

Performance Frames	Disaster below	So-So Above	Good Above
Demand & Revenue	1520	1.900	2.000
Capacity	25%	5%	0%
Profit	0%	5%	200

Demand in detail



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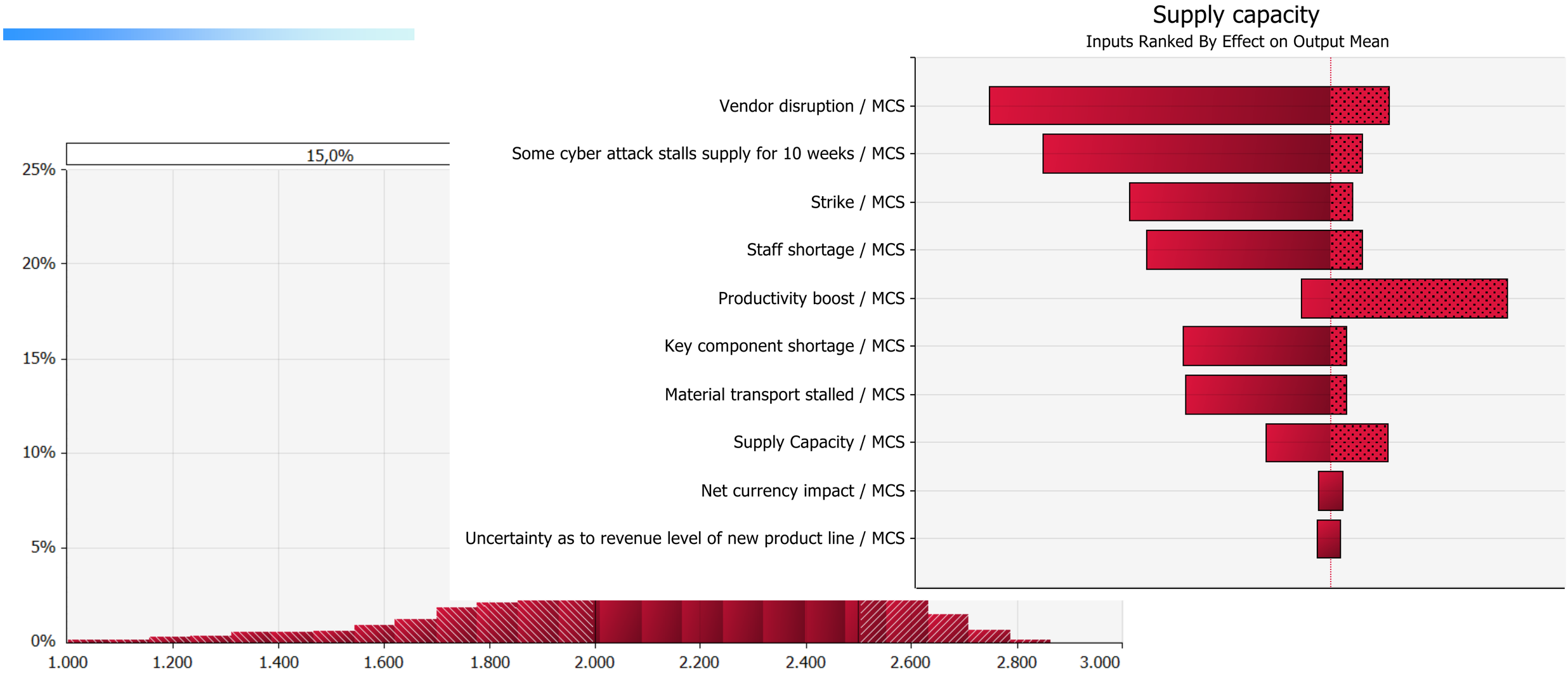
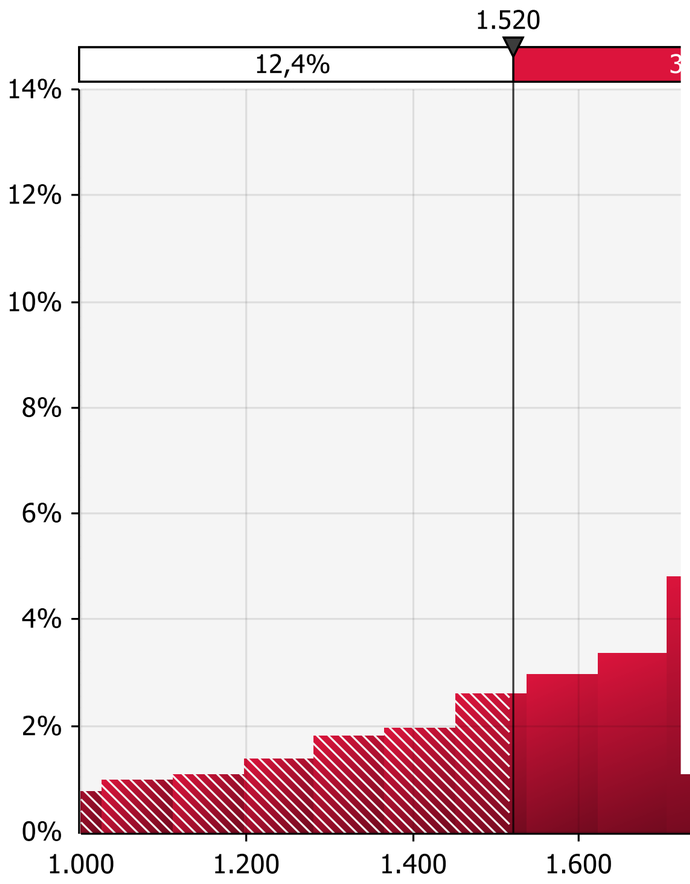
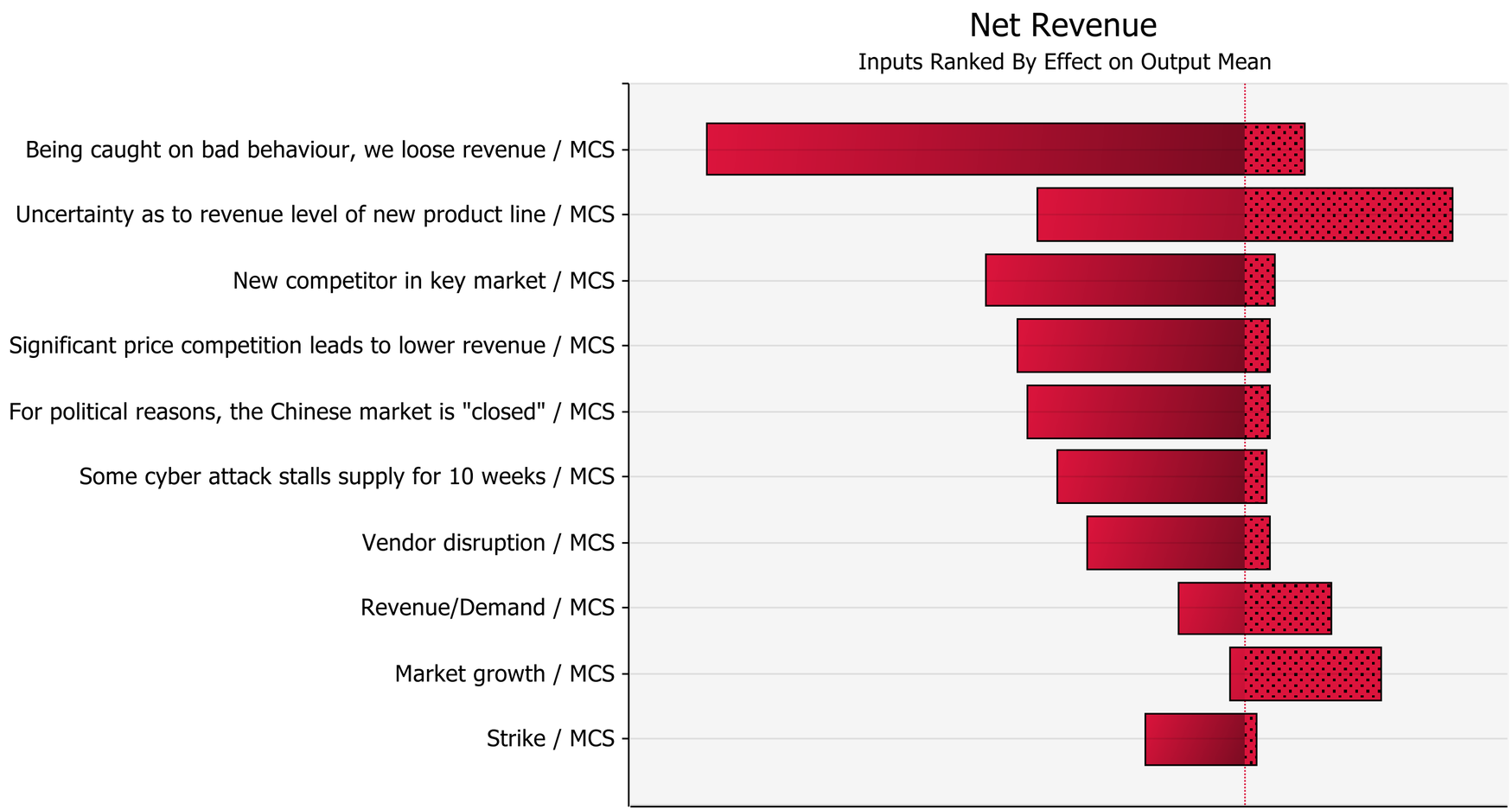
Supply capacity in detail

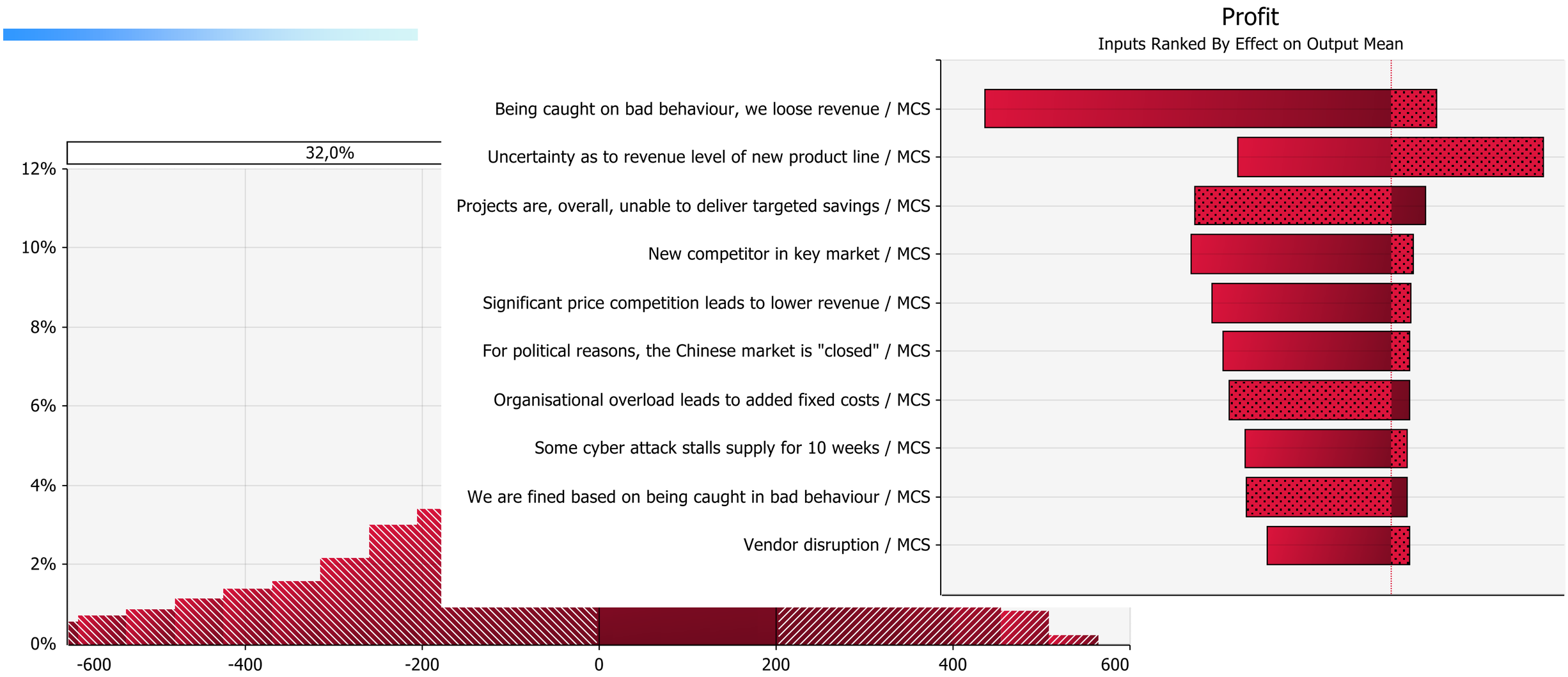


Revenue in detail

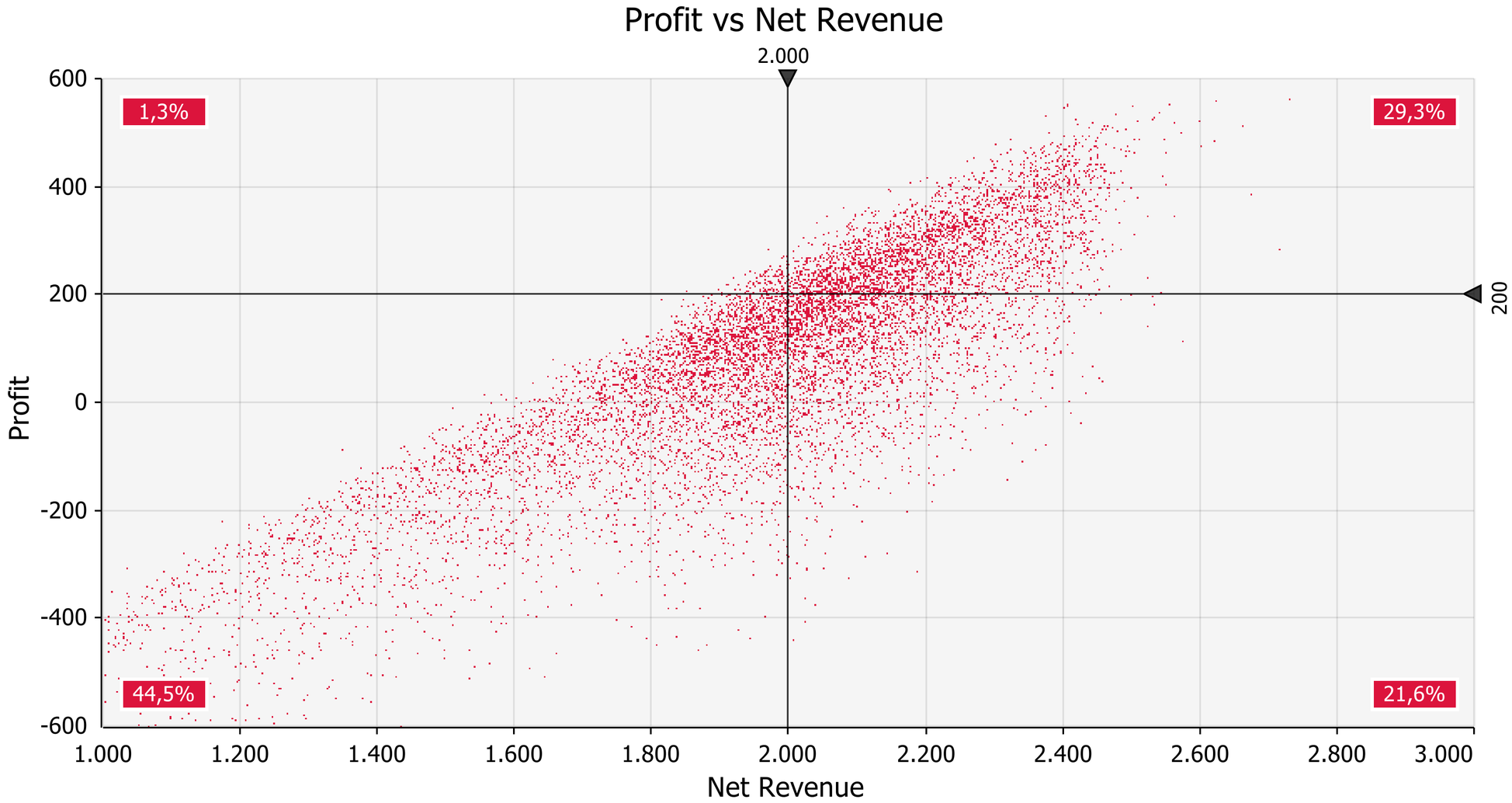




Profit in detail



Matching revenue and profit



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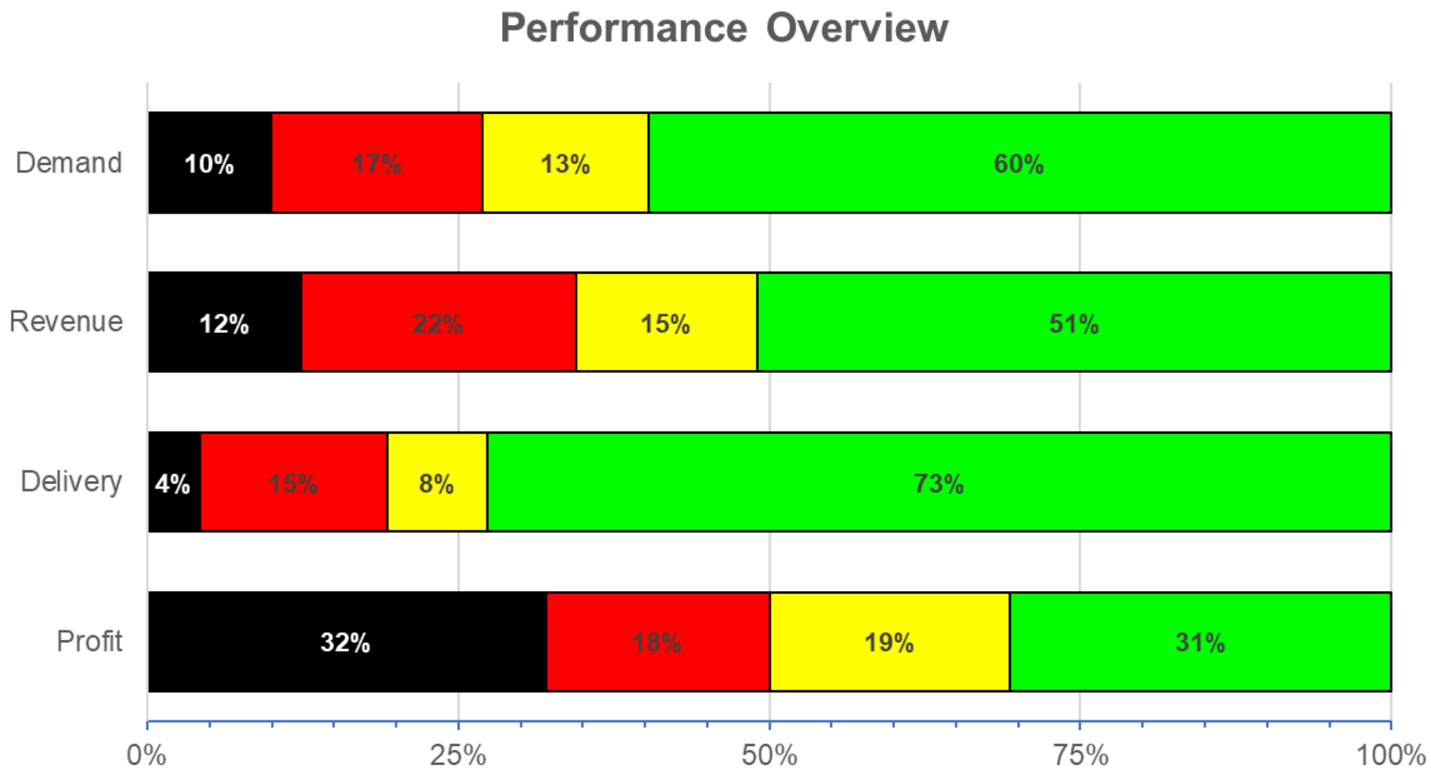
This adds value to a management discussion

- Strong focus on performance
- Linked to specific targets
- Graphics based on defined criteria
  - What is good
  - What is bad
  - What is disastrous
- Talking business language
- Need not be limited to financials
- This approach can be applied for any …
  - Strategy
  - Project
  - Decision



Twists to do to create ERM value

1. Extract your ERM data to a spreadsheet
2. Include a sheet with your performance calculation
3. Have management define what is “good”, “so-so but acceptable”, unacceptable, …
4. Add general uncertainties
5. Add levers/opportunities with likelihood and expected impact
6. Categorize risks, uncertainties and levers by type
7. Recalculate expected impact to match type (revenue, variable costs, etc.)
8. Add (proxy) ranges using a factor
9. Run model and look at tornado diagrams
10. Validate the ranges of those most important risks, uncertainties and levers
11. Re-run model
12. Generate reporting and insights

Agenda

Currently, ERM is often a standalone process leading to a standalone reporting which helps no-one

To earn its license to operate, risk management must add business value

A few simple twists and enhancements can make your ERM highly valuable

Thank you

- This presentation will be downloadable
- The reference model, I have used throughout, will be downloadable
- Should this lead to questions and/or comments, feel free to contact me directly

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- I will be available for training and consulting, should you believe this could be of value to you

Presenting myself

- Danish, 66 with four children and four grandchildren
- M.Sc. in Electrical Power Engineering
- 35 years of broad LEGO Group experience
  - 2 years in IT
  - 13 years in Supply Chain
  - 4 years in Product Development
  - 6 years in Finance
  - 10 years in Strategic Risk Management
- Started **AKTUS** risk advisory April 2017
  - AKTUS = “AKTiv USikkerhed” (i.e. Active Uncertainties)
  - Uncertainties are facts of life … you may as well learn to manage these to your benefit
  - In a volatile world, manoeuvrability is a competitive advantage