

Driving Investment Efficiency
in Chemical Industry

Accelerator Forum 2024

11:45



PIERRE-ALAIN SAURIN

Global Head of
Engineering Excellence



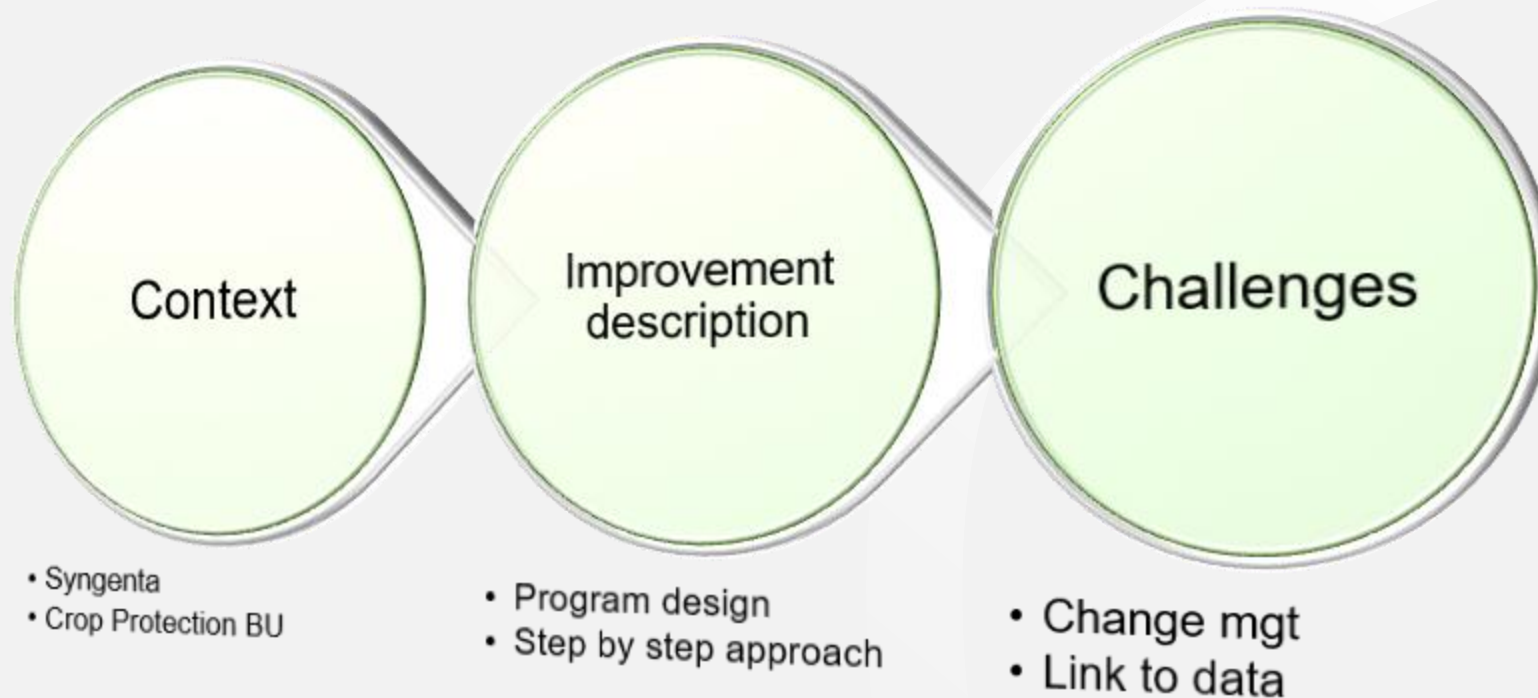
CapEx Efficiency improvement in chemical industry

Pierre-Alain Saurin
Accelerator Forum

Classification: External Use



Presentation Flow



Personal presentation



Engineering Excellence Lead – CP organization / 27 sites

Syngenta roles:

Site Manager / Site Engineering Manager

Previous experience



Driving Investment Efficiency in Chemical Industry

November 28, 2024

Pierre-Alain Saurin
Global Head of Engineering Excellence
Syngenta

A portrait of Pierre-Alain Saurin, a man with short dark hair and glasses, wearing a light blue button-down shirt, standing in front of a building and greenery.The Syngenta logo, a stylized blue and cyan leaf-like shape.

Syngenta Group creates long-term, **sustainable value** for farmers everywhere



With our HQ in Basel, Switzerland, Syngenta Group is a leading sustainable agricultural innovation and technology company.

Our 60,000 employees in more than 100 countries deliver the broadest range of products and services for the benefit of farmers, society and our planet.

Global
#1
in Crop
Protection and
Biologicals

China
#1
in Crop
Protection
and Seeds

Global
#3
in Seeds

Our four Business Units

- Digital farming
- Agronomic inputs
- Performing seeds
- Biotechnology
- Regenerative agriculture
- Sustainable solutions



Syngenta Crop Protection is a world leader in protecting crops.



ADAMA is a global leader in off-patent crop protection.

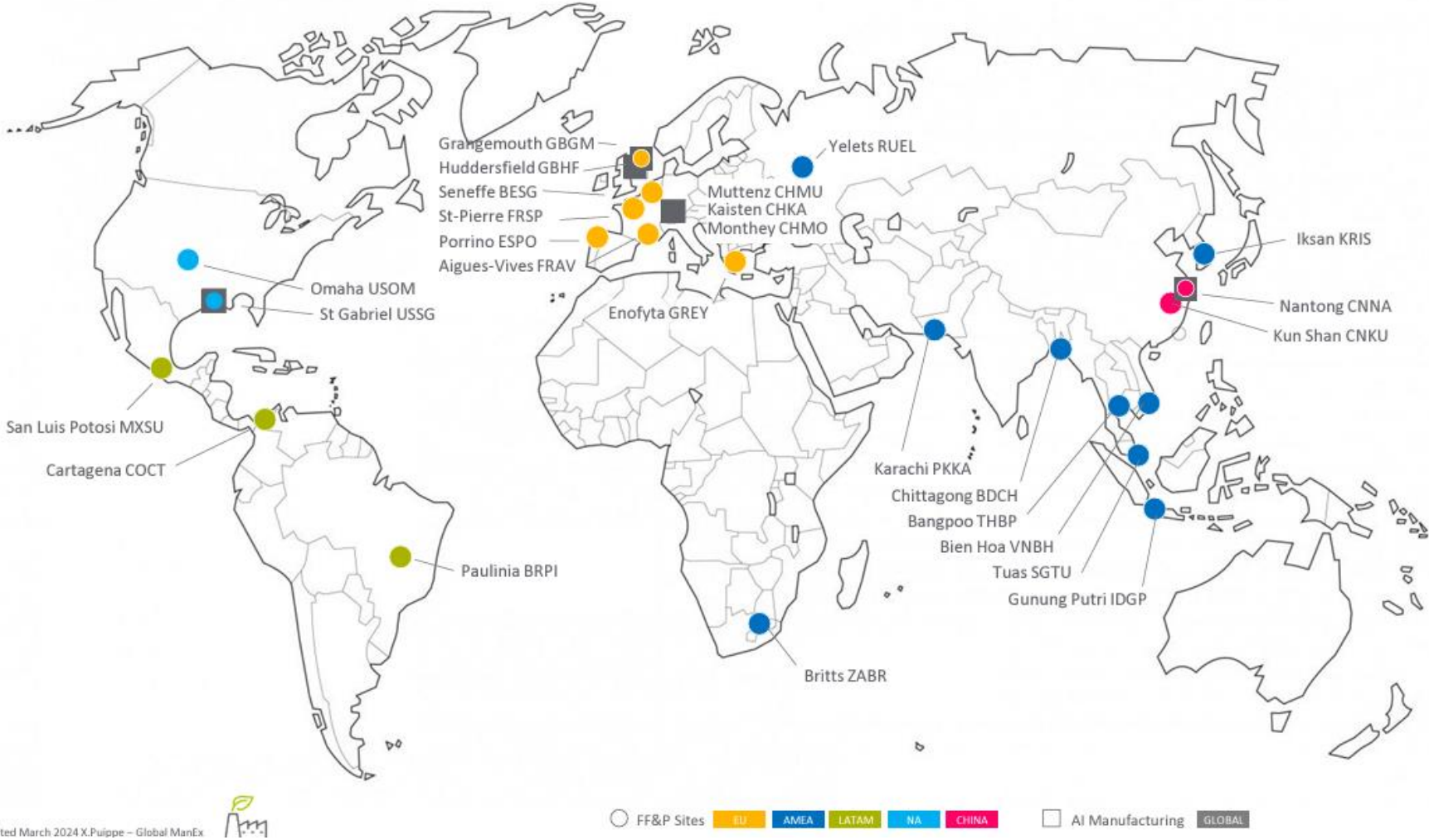


Syngenta Seeds is one of the world's largest developers and producers of seed.



Syngenta Group China is China's leading agricultural technology and innovation partner, consisting of crop protection, seeds, crop nutrition, MAP and digital agriculture businesses.

CP Manufacturing Asset



7 AI Sites

CH 3, UK 2, NA, CN

22 FF&P Sites

EU 6, AMEA 9, LATAM 3, NA 2, CN 2

130 Tollers

AMEA 50, LATAM 30, NA 30, EU 20

Annual production above

1'000 mioL/kt

75% in-house FF&P - 25% tolling

About

4'500 Employees

AI 2'000 - FF&P 2'500

Crop Protection Manufacturing Assets



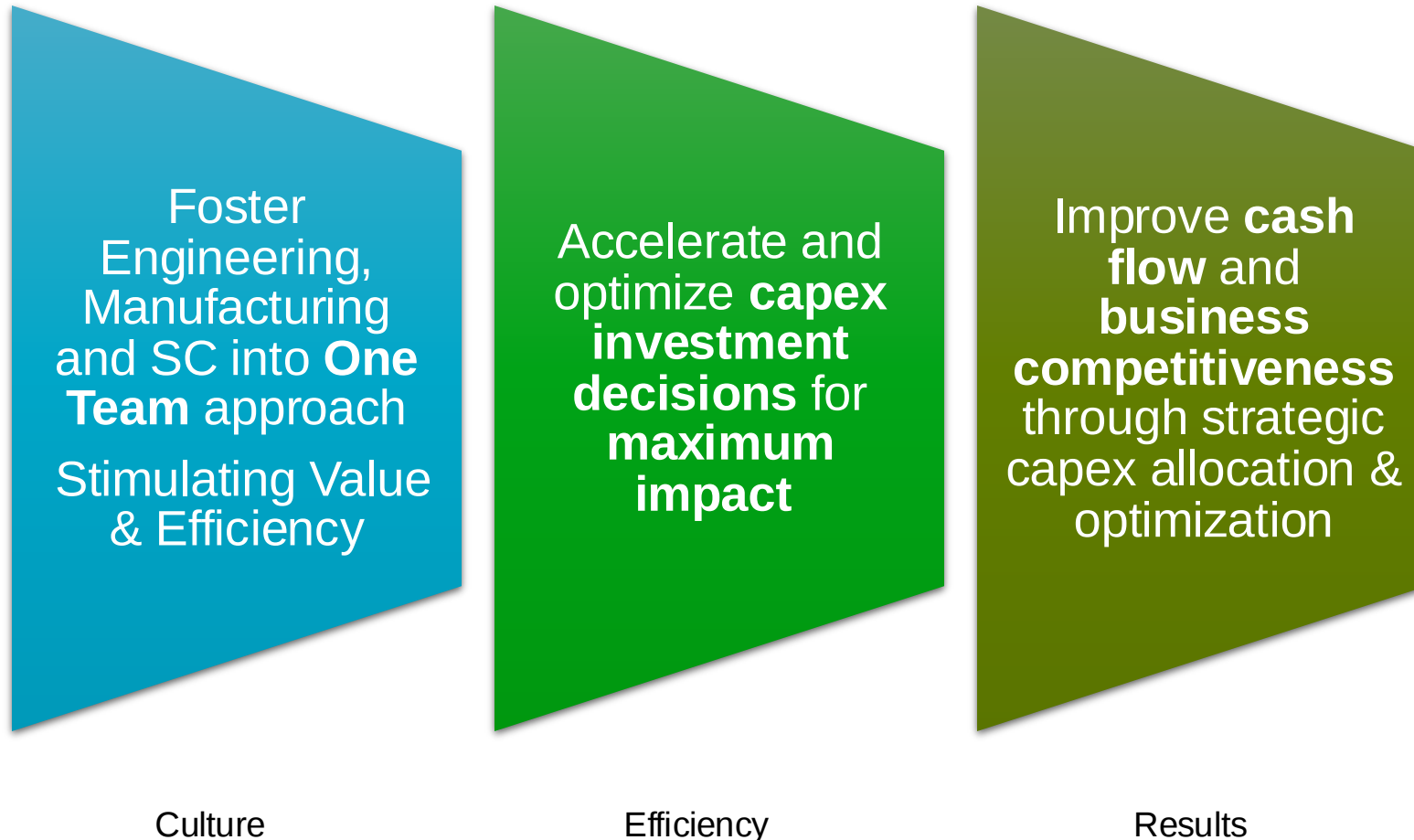
Business requests for asset management (2024+)

- **Improve our cash flow** while continuing to deliver important Capex for sustenance & HSEQ improvements
- Create space for funding new needs on top : **digitalisation and sustainability**
- **Improve site competitiveness** by decreasing depreciation



Our answer: Capex Efficiency Program

Transform the management of CAPEX into a recognized industry leader in **Capex Excellence**:



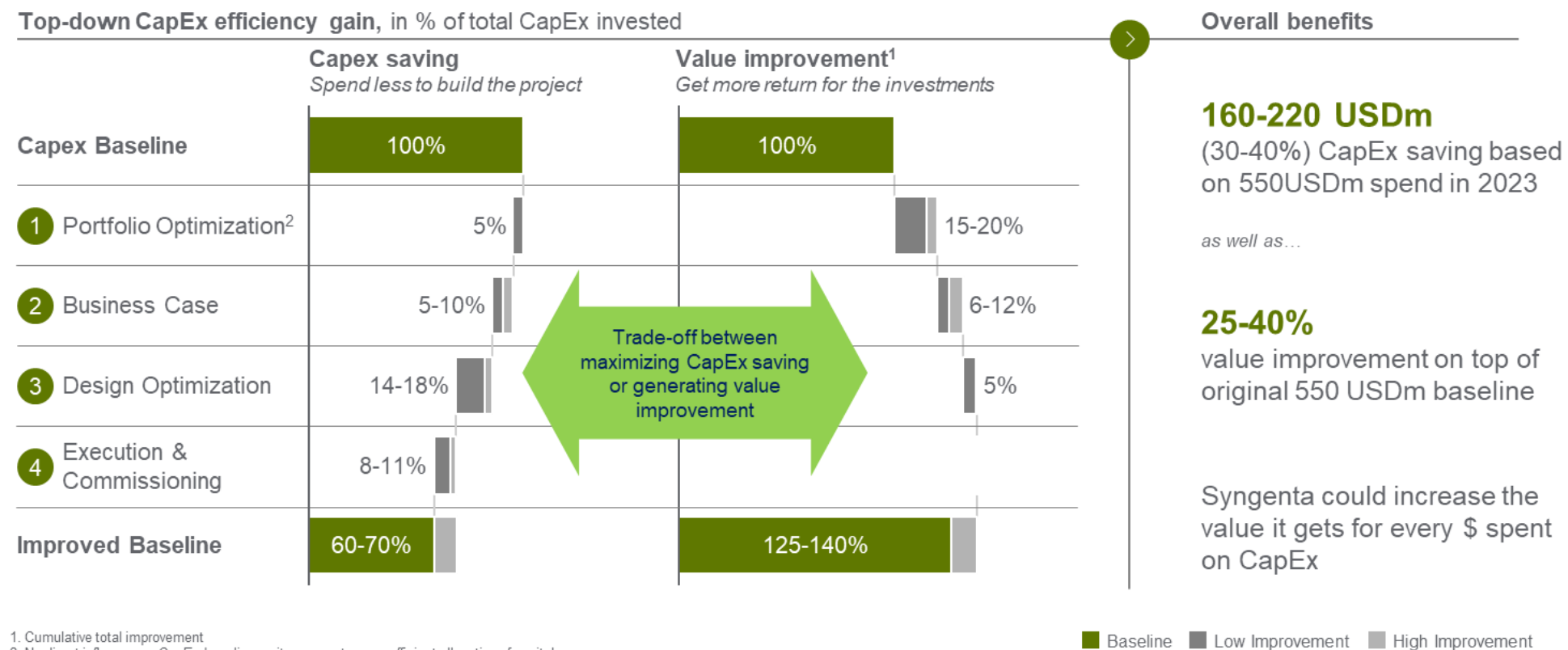
Capital Efficiency Challenge

What potential of improvement do you think you have in your organization for Capex Efficiency?

- 0%
- 5%
- 15%
- 25%
- 40%

Capex Efficiency Program target

The program target to deliver a **25% improvements in capex efficiency** by improving how we run our “end to end” Portfolio & Capex process



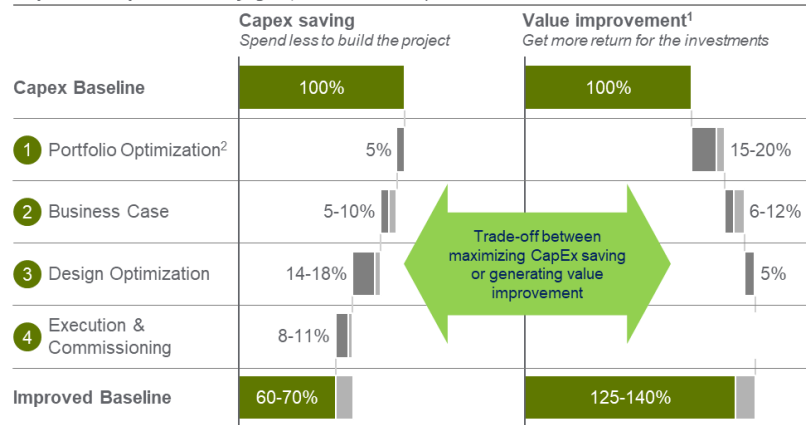
Program Design

Project Portfolio:
Selecting the right projects

Scoping & design:
Selecting the right content

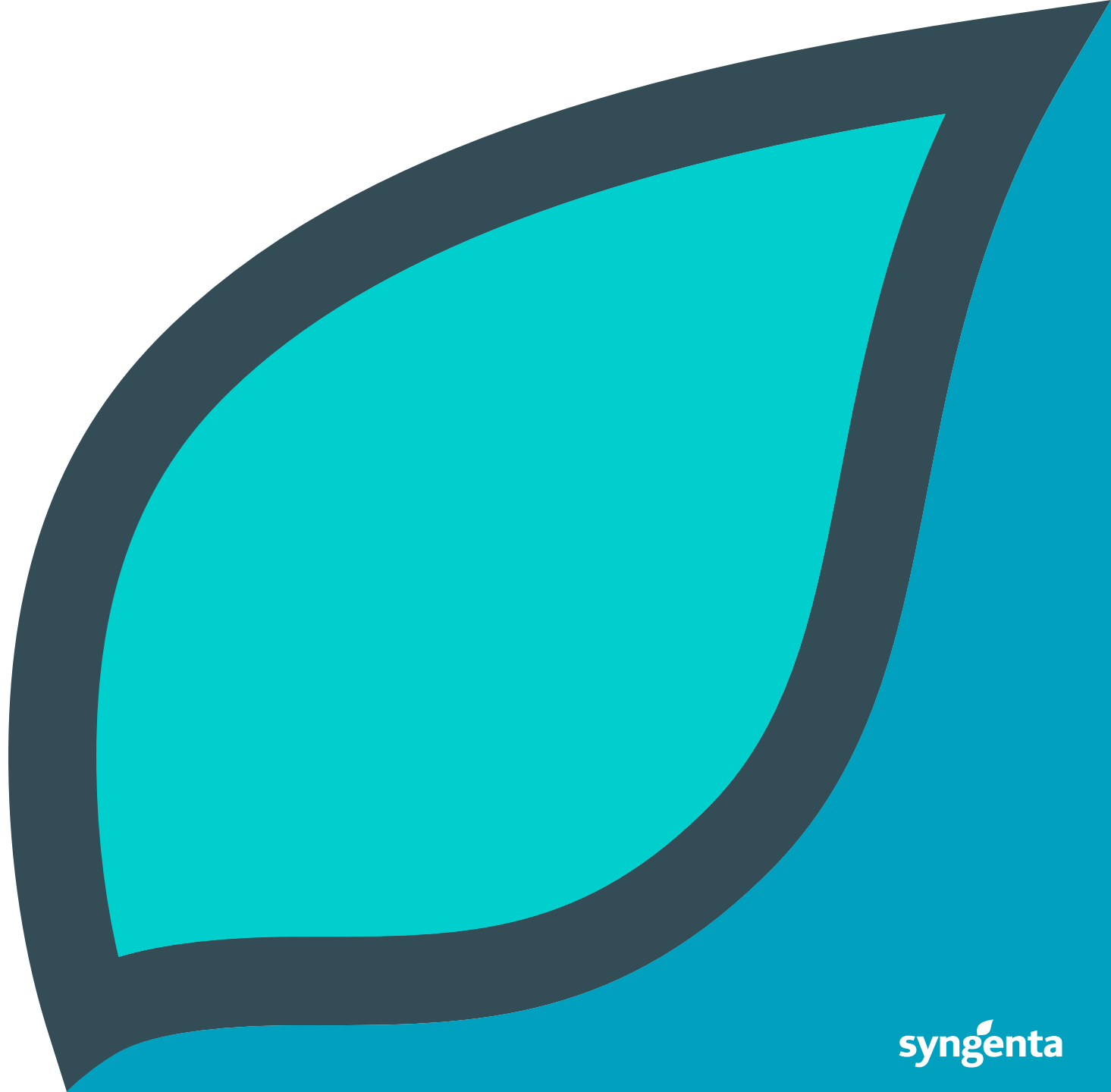
Execution:
Excellence in delivering

Top-down CapEx efficiency gain, in % of total CapEx invested



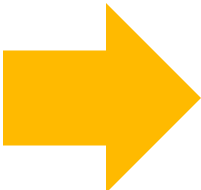
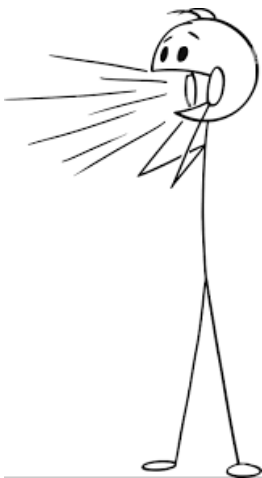
How to select the best projects

Project Portfolio



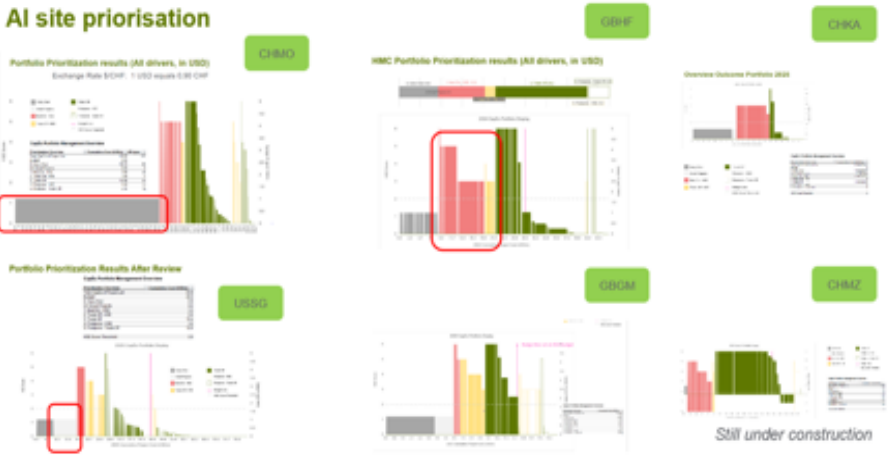
Project Portfolio

What are your challenges for project selection?



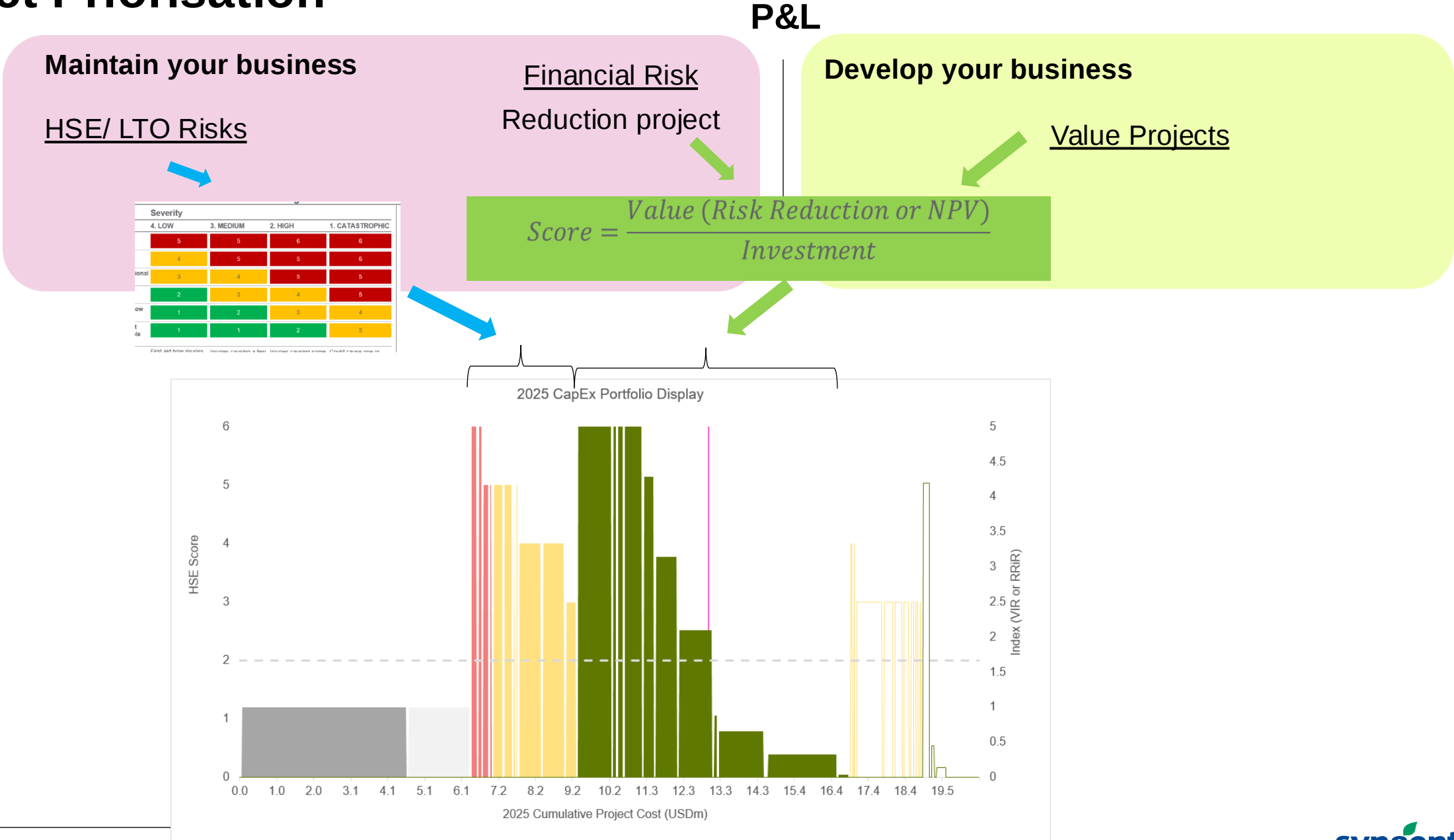
Capex prioritisation for 2025

Criteria / AI Sites	USSG	CHMO	GBGM	GBHF	CHKA	CHMZ	
Total Projects (less carry over & small) #	58	95	24	28	12	31	
Index < 1	25	33	5	2	4	3	
Index < 1 & \$ >= \$0.5m	10	4	2	0	1	1	
Index <= 0.5	15	23	2	2	3	3	
HSE % (By Project Counts)	31%	44%	50%	50%	50%	48%	
HSE % (By Bud Request \$m)	23%	12%	18%	47%	30%	18%	
Carry over (\$m)	6.88	50.13	4.60	8.63	1.65	8.50	
Carry Over % (By Bud Request \$m)	15%	67%	27%	32%	35%	33%	
Small projects (\$m)	9.00	0.00	1.76	0.00	0.19	0.55	Subtotal
Budget request (\$m)	45.42	75.29	16.85	27.15	4.70	25.65	105.06
Budget request with all projects index >= 0.5 (\$m)	37.50	70.54	14.57	26.66	3.76	24.15	177.18
Budget request with all projects index >= 1.0 (\$m)	32.10	66.32	13.08	26.66	3.43	24.15	165.73
Postpone Trade-Off (\$m)	12.63	5.16	1.61	17.35	0.00	0.20	36.95
Postpone HSE (\$m)	3.19	3.40	2.01	1.84	0.00	1.00	11.44
	15.82	8.56	3.62	19.19	0.00	1.20	48.39



From emotional to analytical

Project Prioritisation



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Classification: External Use

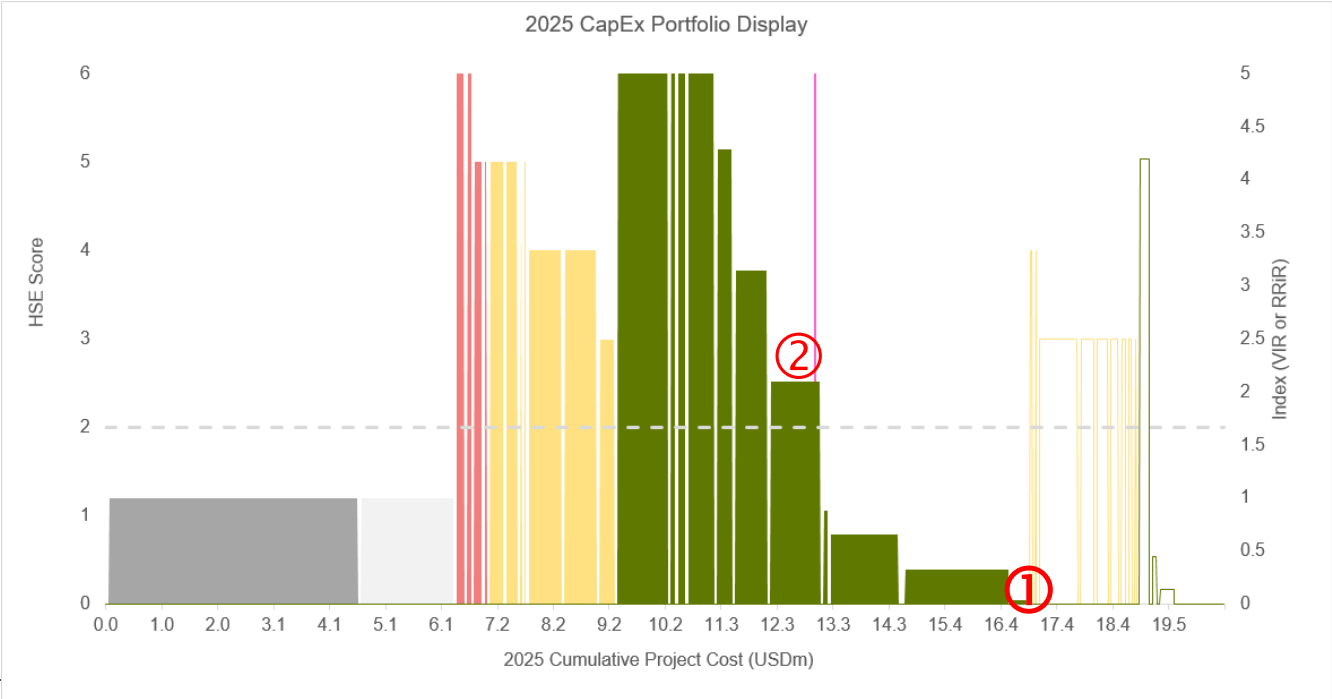
Examples – comparing 2 sustenance projects

①

Risk	1 month downtime
Probability	35%
Sales Impact	None
Site Cost impact	84k
Investment	740k
Risk Reduction Ratio	0,11



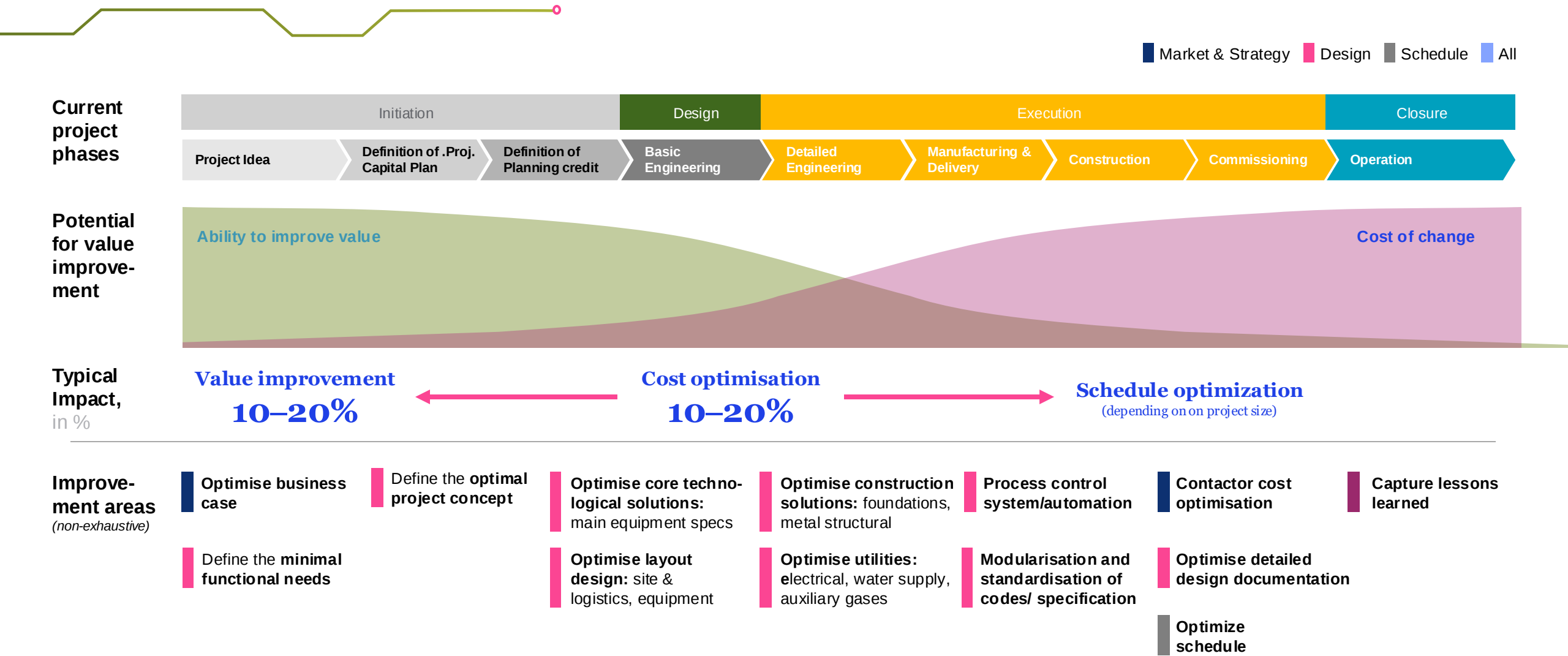
Risk	5 days downtime
Probability	95%
Sales Impact	None
Site Cost impact	200 k
Investment	90k
Risk Reduction Ratio	2,22 ②



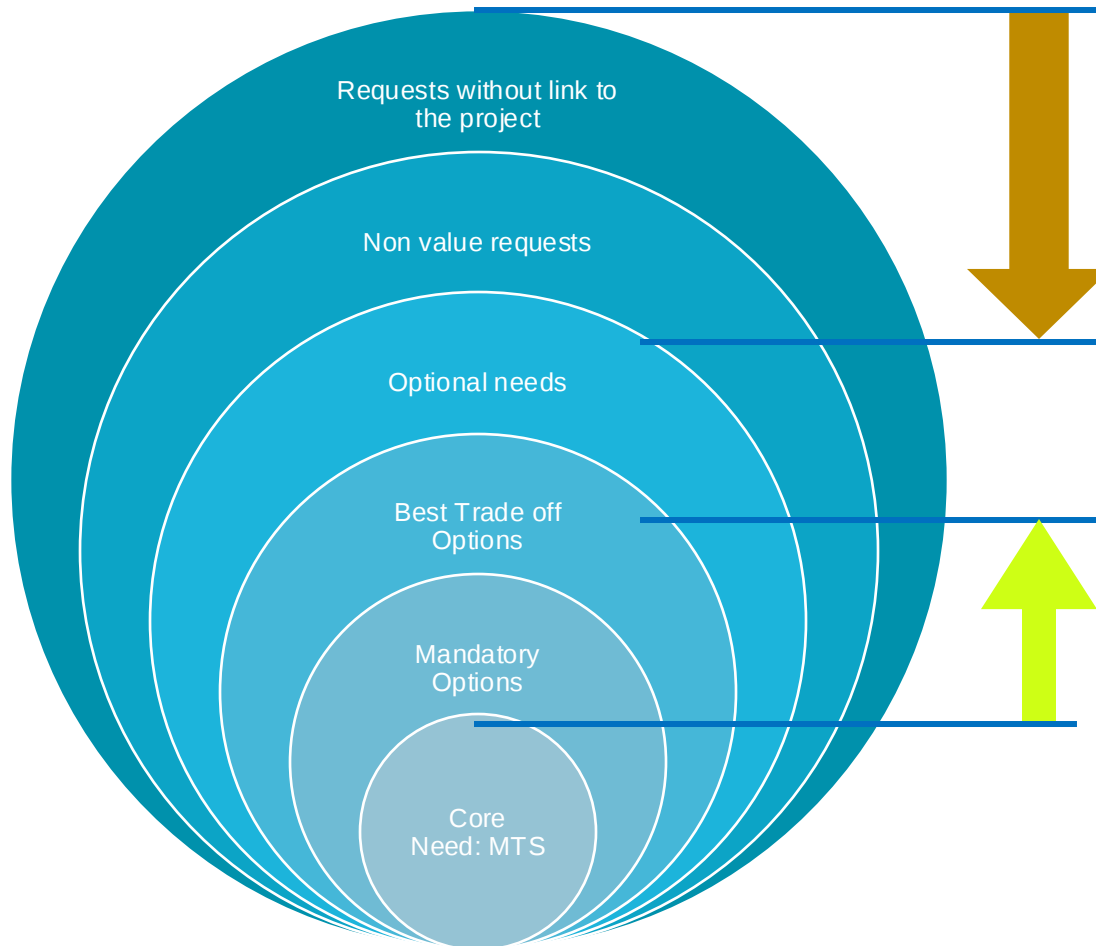
How to select the right content

Project Scoping & Design

Highest value can be generated via scoping and design



Project scoping: We aim to reverse the challenge!



Last 10 years Way of Working

PM challenge the scope to find the minimum requirement

High resource consuming

Some PM abandon challenge after a certain time

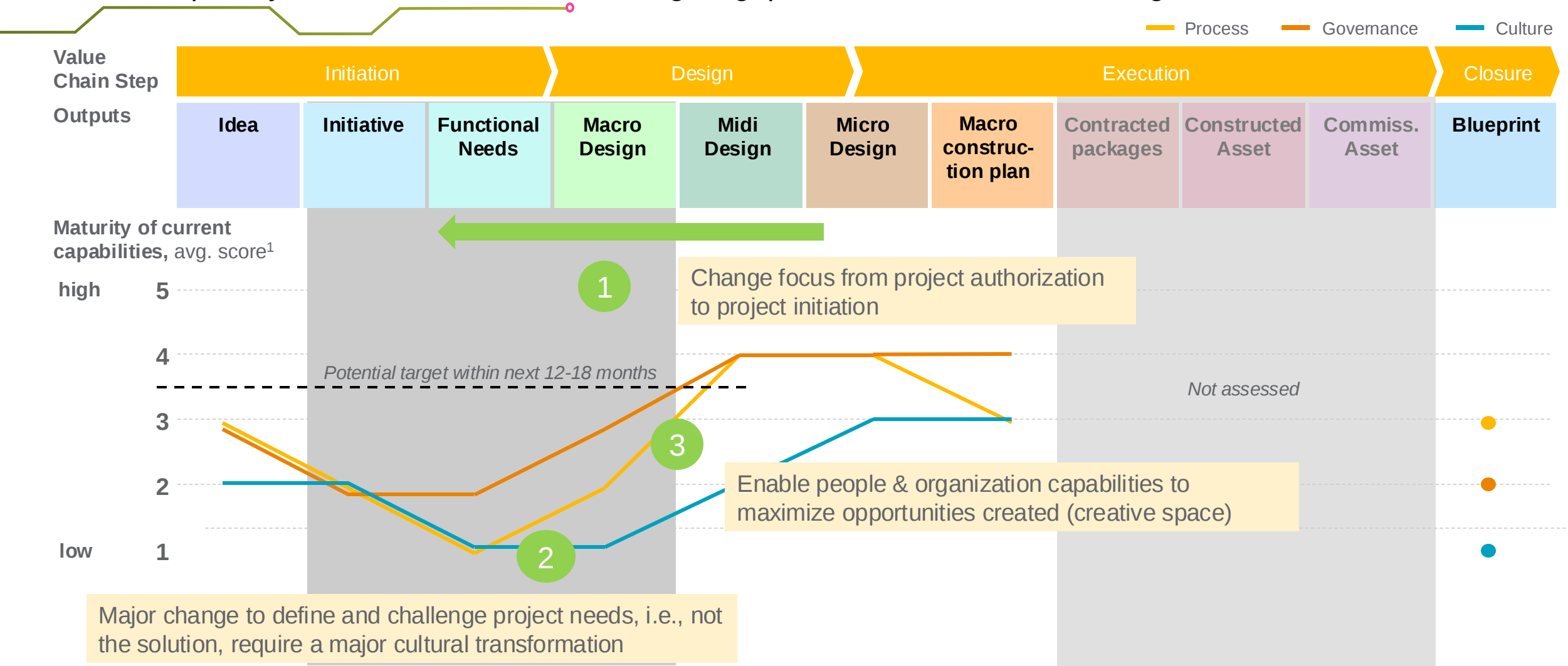
Our Target for change

PM start with a **minimum required need**

Options are justified by requester

Major challenges and priority topics for adoption

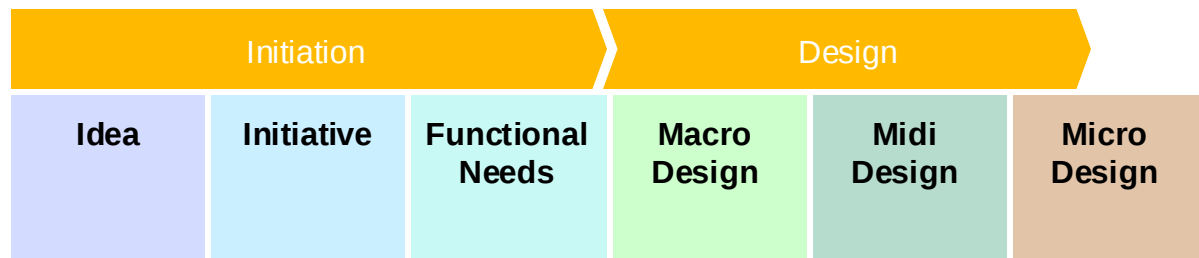
- The Capability assessment revealed the largest gap in initiation and macro design



Example

Initial request: Vessel replacement. Estimated: 1,2 m\$

Justification: Obsolescence of specific steam generator 15 bars (incinerator compliance). Replacing vessel heating mode to use standard steam (12 bars)



Business needs

Deep dive requesting written justification helped to recognize driver was incinerator reliability / not compliance

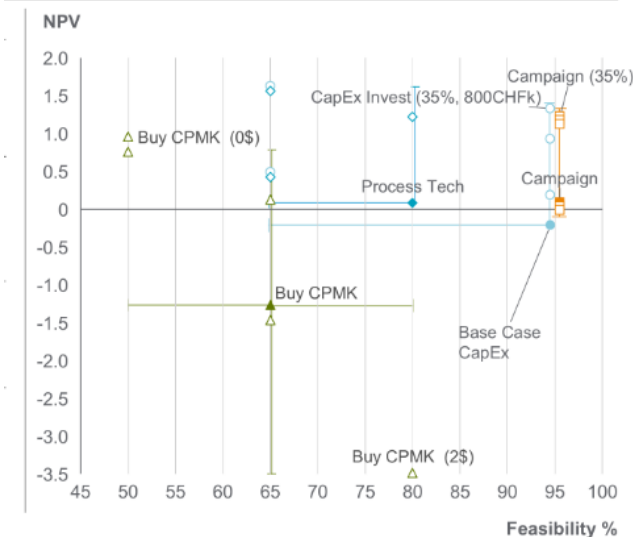
Alternative explorations

Outsource production
Chemical tests to operate @ a lower temperature
Production campaign

Financial decision based

NPV calculation demonstrated that 1 month product stock was a better business case (to manage risk of shutdown)

NPV¹ depending on assumptions, in CHFm



Result

1,2 m\$ investment saved
Securing production by starting production campaign 1 month earlier

Excellence in delivering

Project Execution

Project Execution

Detailed
Engineering

Construction

Commissioning

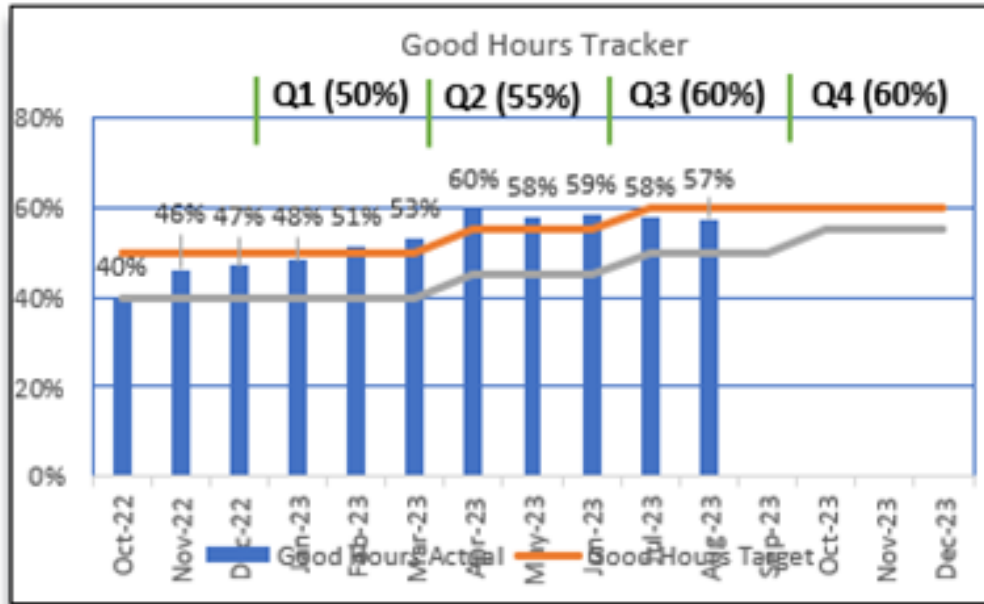
- Engineering Platform
- Insource / Outsource



- Knowledge management
- Codification of best practices

Improvement on construction activities

US site. Focusing on main general contractor (200+ FTE)



Good Hours/ Actual Hours = % Good Hours

- Weekly audits on activities with comparison: invoice versus theoretical cost
- Developing our cost estimate capabilities
- Common incentive with supplier to reduce the gap
- 40% improvement in one year: from 40% to 57% of “good hours”

Challenges

Executive summary and challenge

First results in 10 months: 15 m\$ savings and 50 m\$ cash flow improvement for 2025 (priorisation)

From Solution to Needs

- Project sponsors needs to change their requests and accept to be challenged
- Functional need identification
- Variability in business

Data & KPI

- Availability:
 - financial,
 - business forecast,
 - site costs
 - Asset status
- Quality of data
- KPI for measurement of progress

Change Management

- Change management across 27 sites & different cultures
- Moving from capacity constraints to cost constraints environment / strong need to foster a cultural business mindset in engineering and manufacturing staff
- Data can challenge individual intuition

Major transformation impacting 1000+ employees but essential for the future of our manufacturing

A wide-angle photograph of a dirt road cutting through a lush green cornfield. The rows of corn are tall and dense on both sides of the path. In the far distance, a small tractor is visible on the road. The sky is a vibrant blue with wispy white clouds. The Syngenta logo is centered in the upper half of the image.

syngenta