ASSET MANAGEMENT
Impact on Shareholder Value

EGON DOYER - Global Business Development Manager
Asset Management and Asset Reliability solutions

Asset Management in World Class Companies

Increased Overall Equipment Effectiveness (OEE)

Decreased Total Cost of Ownership (TCO)

Roadmap

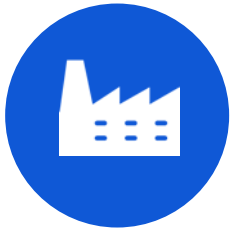
- Asset Management and the impact on Shareholder Value
- How to identify your needs and business value
- Business improvement examples
- Summary

Typical Business Drivers today

Improved Output & productivity

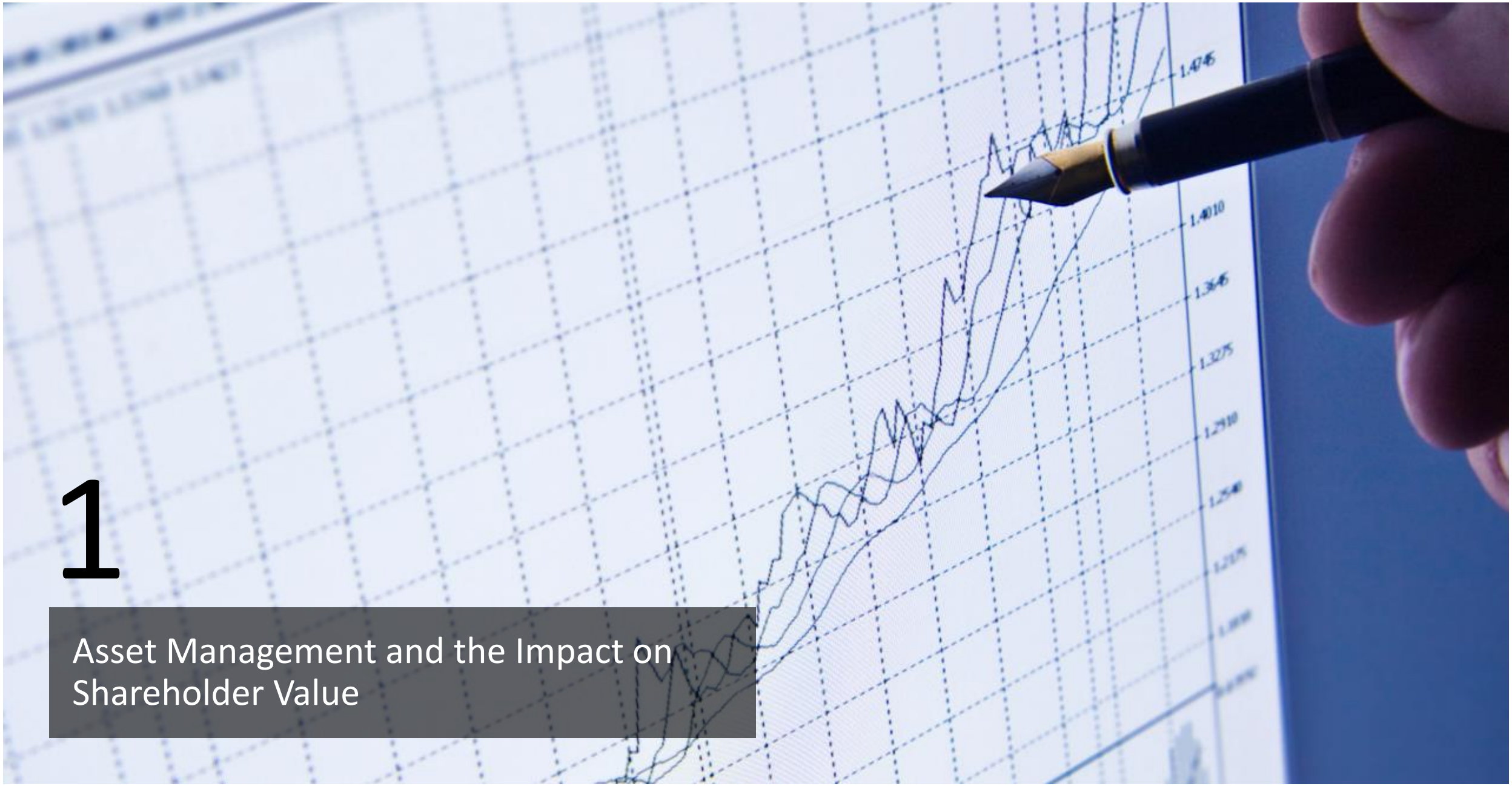
Reduced total cost of ownership

Retain skills and attract new talent



Safe & reliable operations and maintenance

Increased Sustainability



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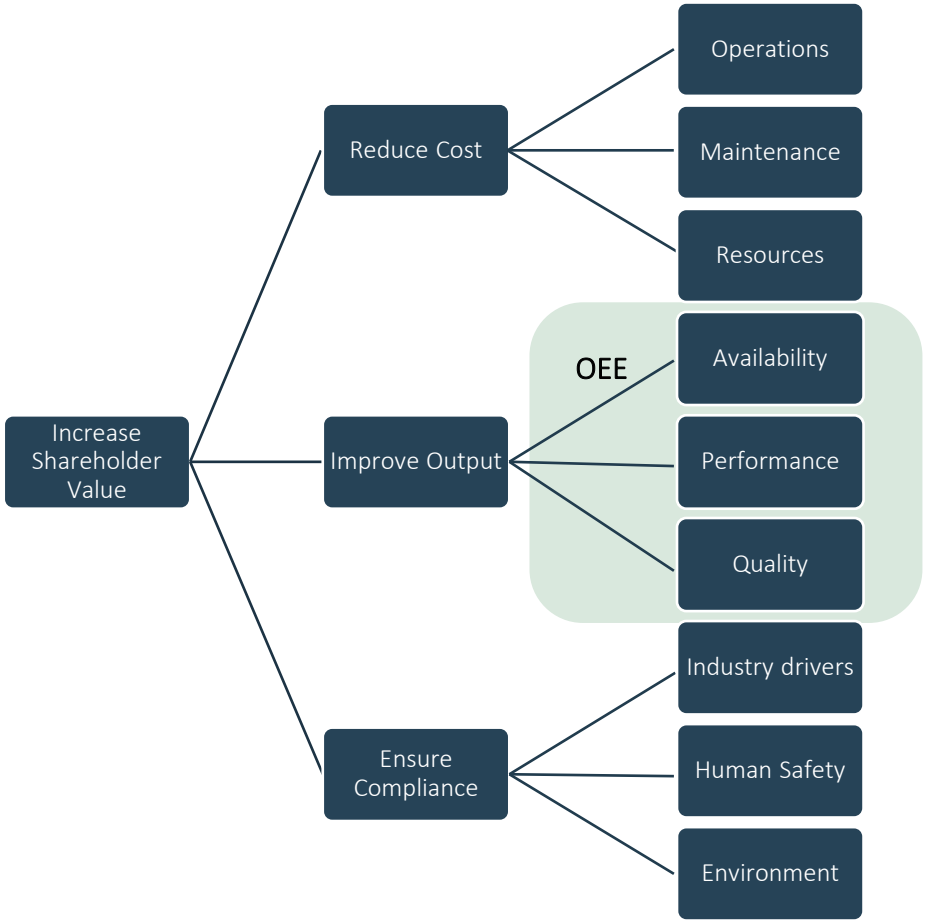
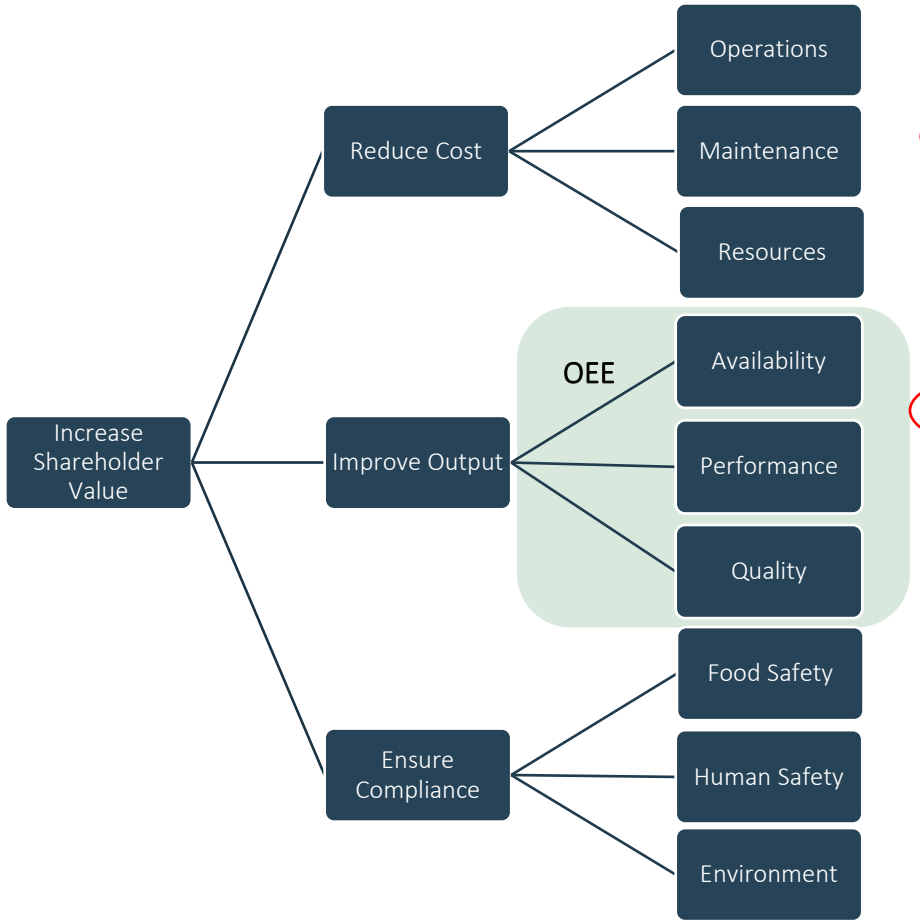
Asset Management and the Impact on Shareholder Value

Shareholder Value



Example From a Customer perspective



KPI	Benchmark	Actual	Value GAP
Plant Cost / MT	€ 18.80	€ 19.40	€ 7,200,000
Maintenance Cost / MT	€ 5.30	€ 5.67	€ 4,440,000
Maintenance Cost / ERV	3,00%	4,44%	
Bearing Spend / MT	€ 0.0044	€ 0.0051	€ 61,200
Labor Cost / MT	€ 6.15	€ 6.21	€ 720,000
Energy Cost / MT	€ 3.70	€ 3.77	€ 840,000
Technical Availability	98.50%	96.90%	MT 192.000
OEE	93.00%	89.70%	MT 396.000
Q-OEE	100%	100%	-
Food Safety*	0 incidents	0 incidents	-
Safety	0 incidents	0 incidents	-
Environment	0 incidents	0 incidents	-
Production output MT	12,000,000		
Increase of asset utilization adds MT 192.000 output			
Optimizing Maintenance reduces value chain cost by Euro 4.4 Mio			

Do you know where you are going?

Maintenance Cost

OEE

Stores Value

Legal Compliance

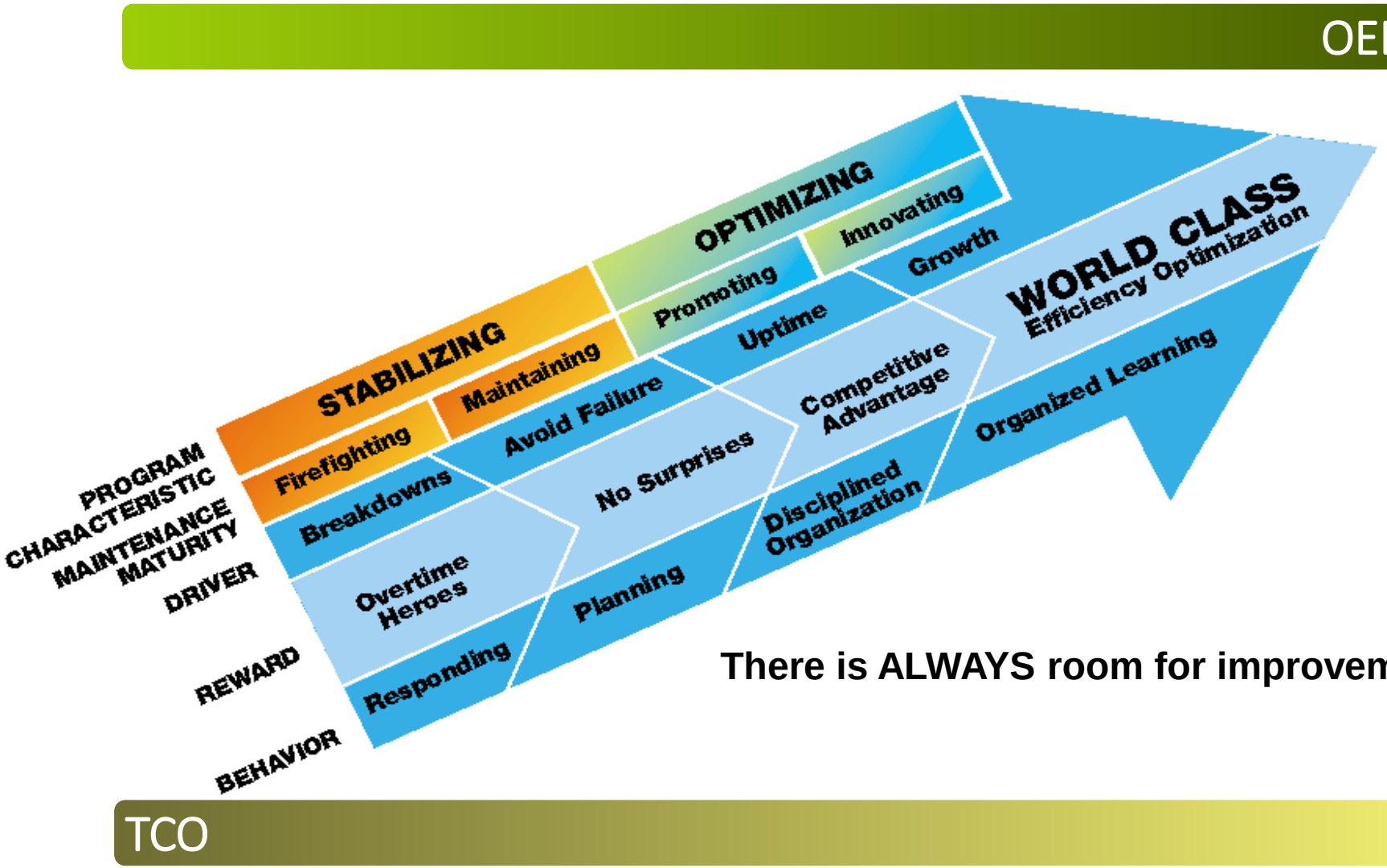
Energy Cost

Unplanned Work

Knowledge Management

Performance Killers & Cost Drivers

Asset Management- Continuous Improvement



There is ALWAYS room for improvement!

SKF Asset Efficiency Optimization (AEO) for Asset Management

1. Do you know, why you do, what you do?

2. Can you turn strategy into practice ?

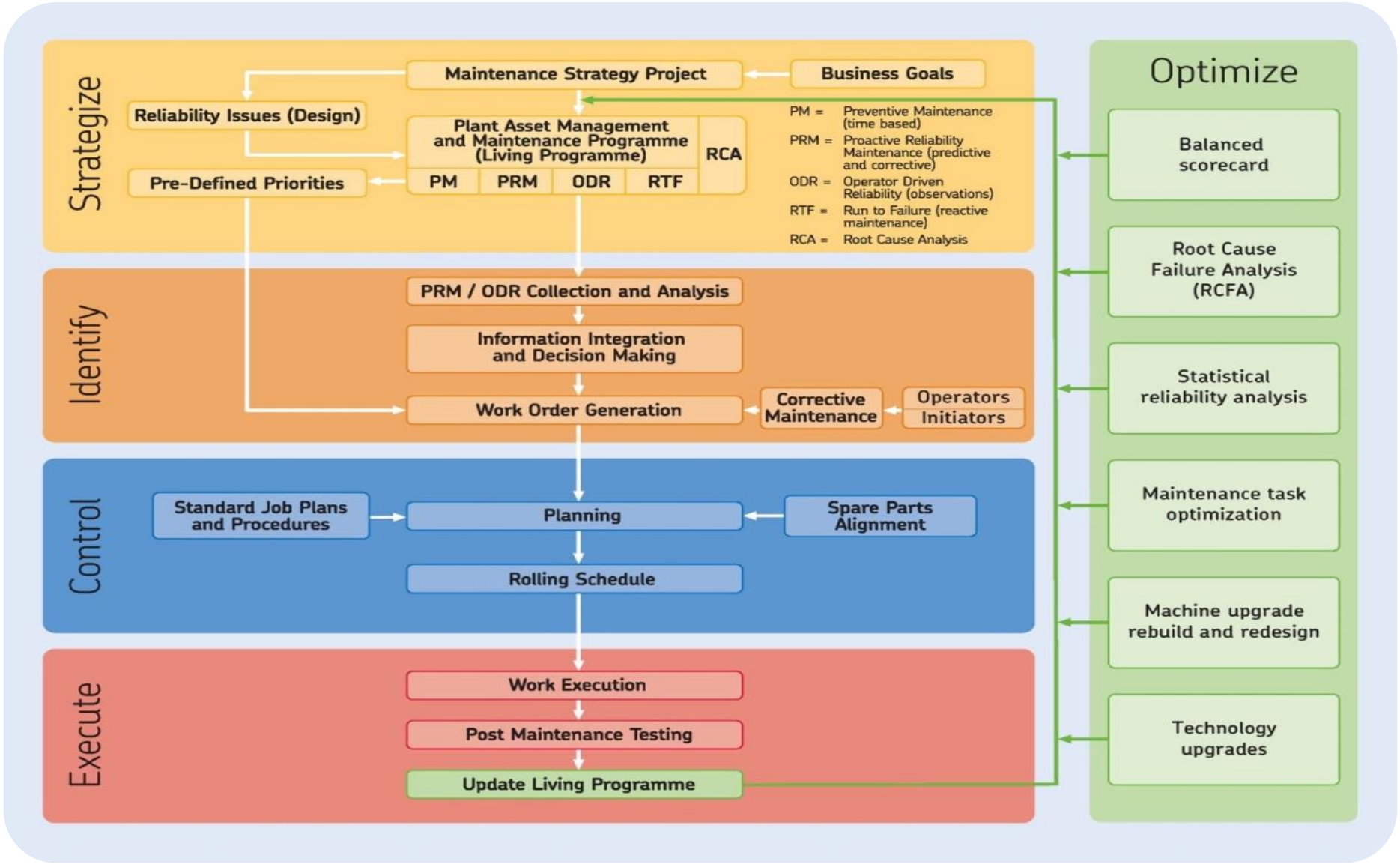
5. Do you learn and improve?

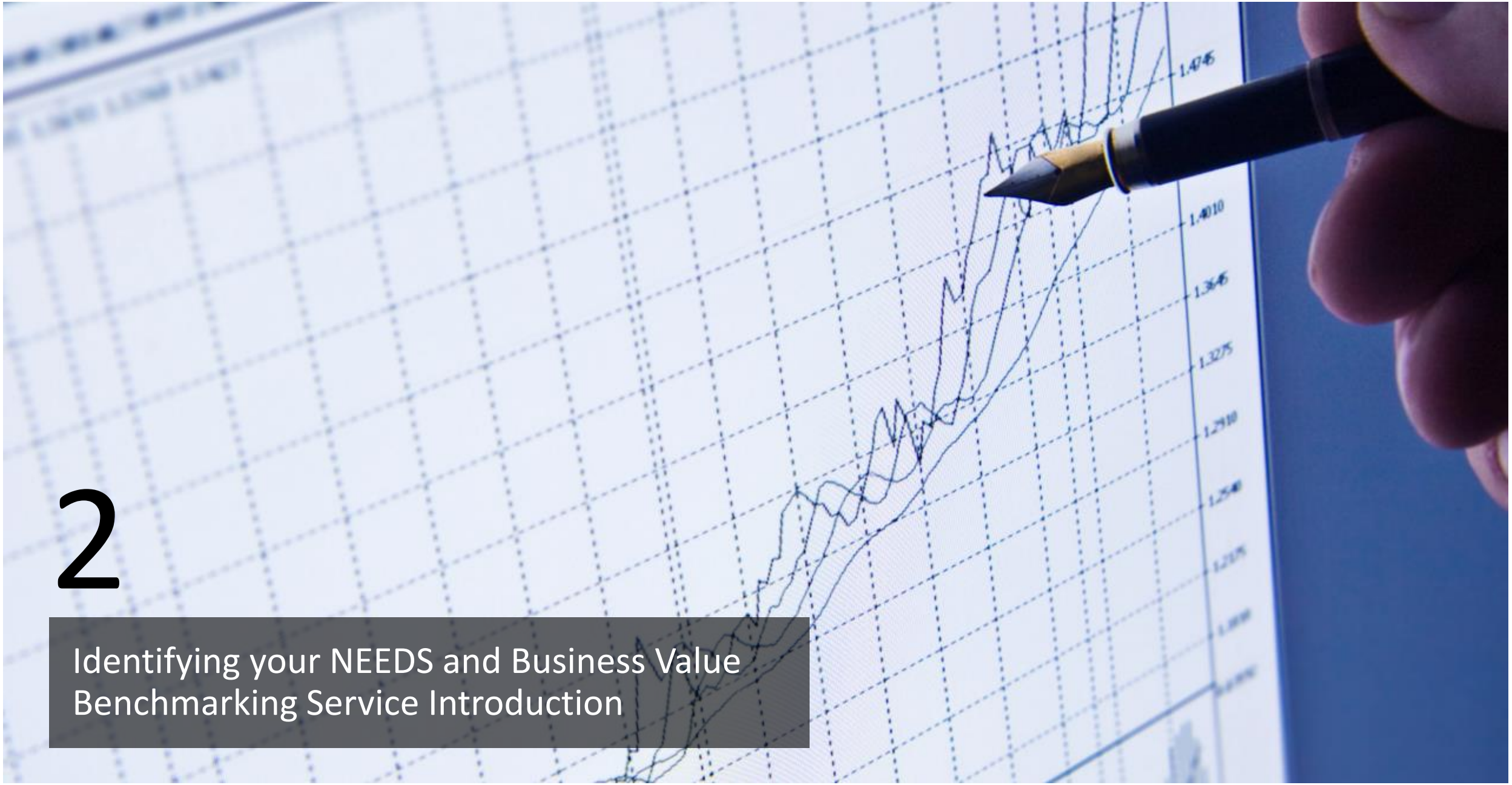
3. Can you do what you should, well?

4. Did you do the right work right?

Strategize | Identify | Control | Execute | Optimize

Five Elements of the Asset Efficiency Optimization model for Asset Management





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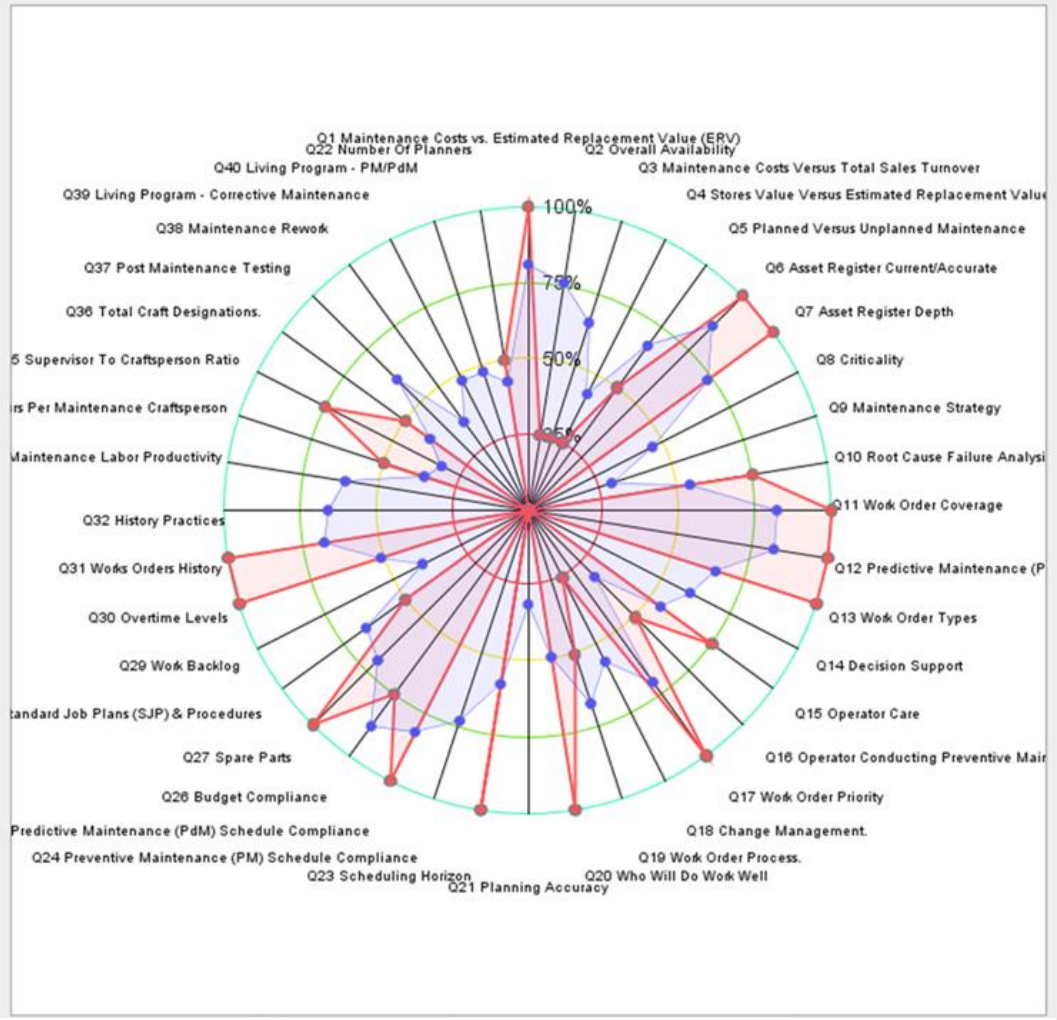
Identifying your NEEDS and Business Value Benchmarking Service Introduction

SKF Client Needs Analysis (CNA)



Assessment & benchmark tool, used to

- Identify maintenance maturity
- Identify & benchmark performance gaps
- Helps select priorities for improvement
- Defines a future roadmap for improvement with business case & ROI

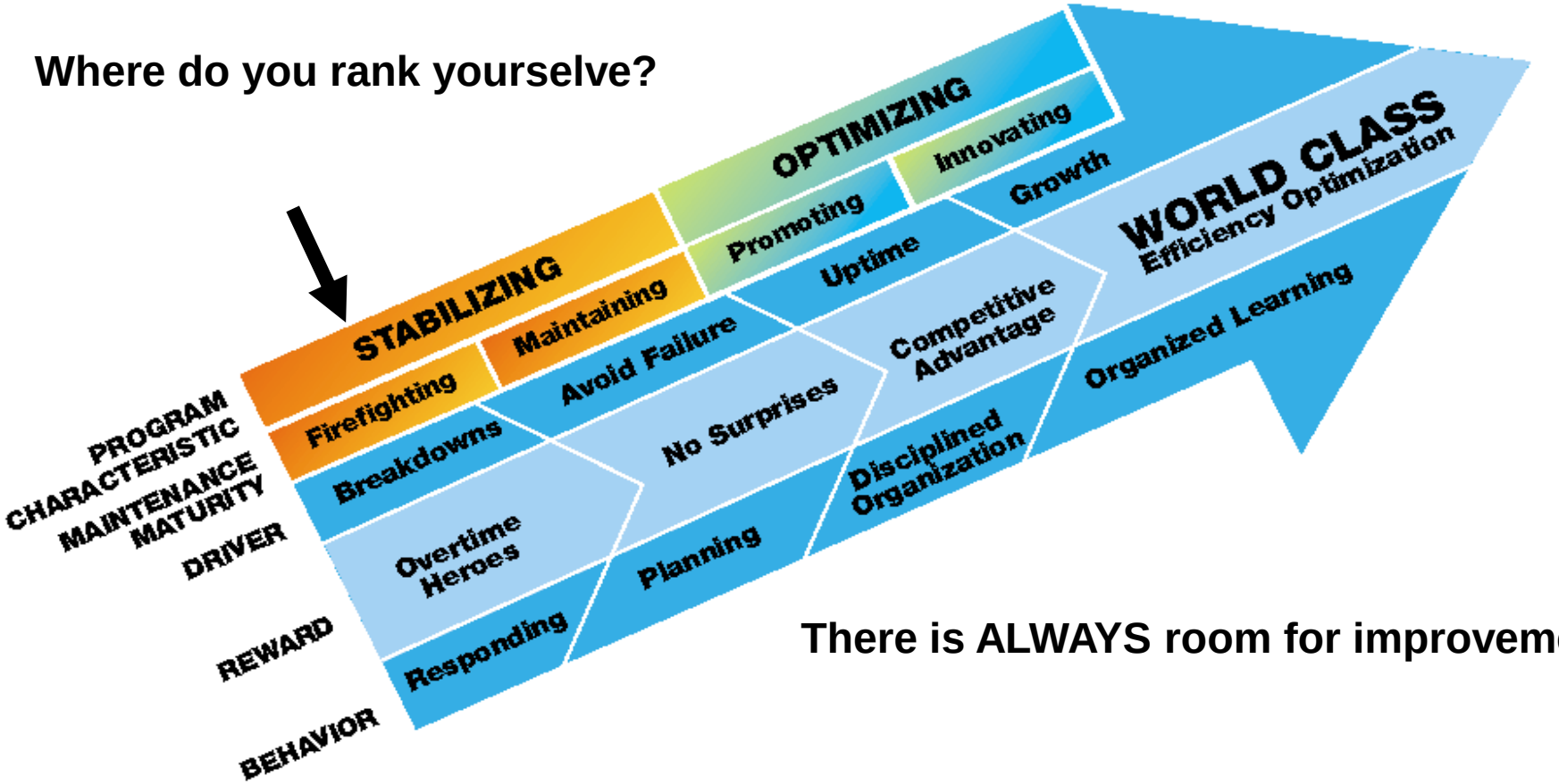
- >1800 Assessments conducted globally across a range of industry sectors
  - Pulp & Paper >450 assessments conducted
  - Metals >250 assessments conducted
  - Food & Beverage >320 assessments conducted
  - Mining & Mineral Processing >310 assessments conducted

- Knowledge & insight into your industrial sector!

Continuous Improvement and Maturity

OEE

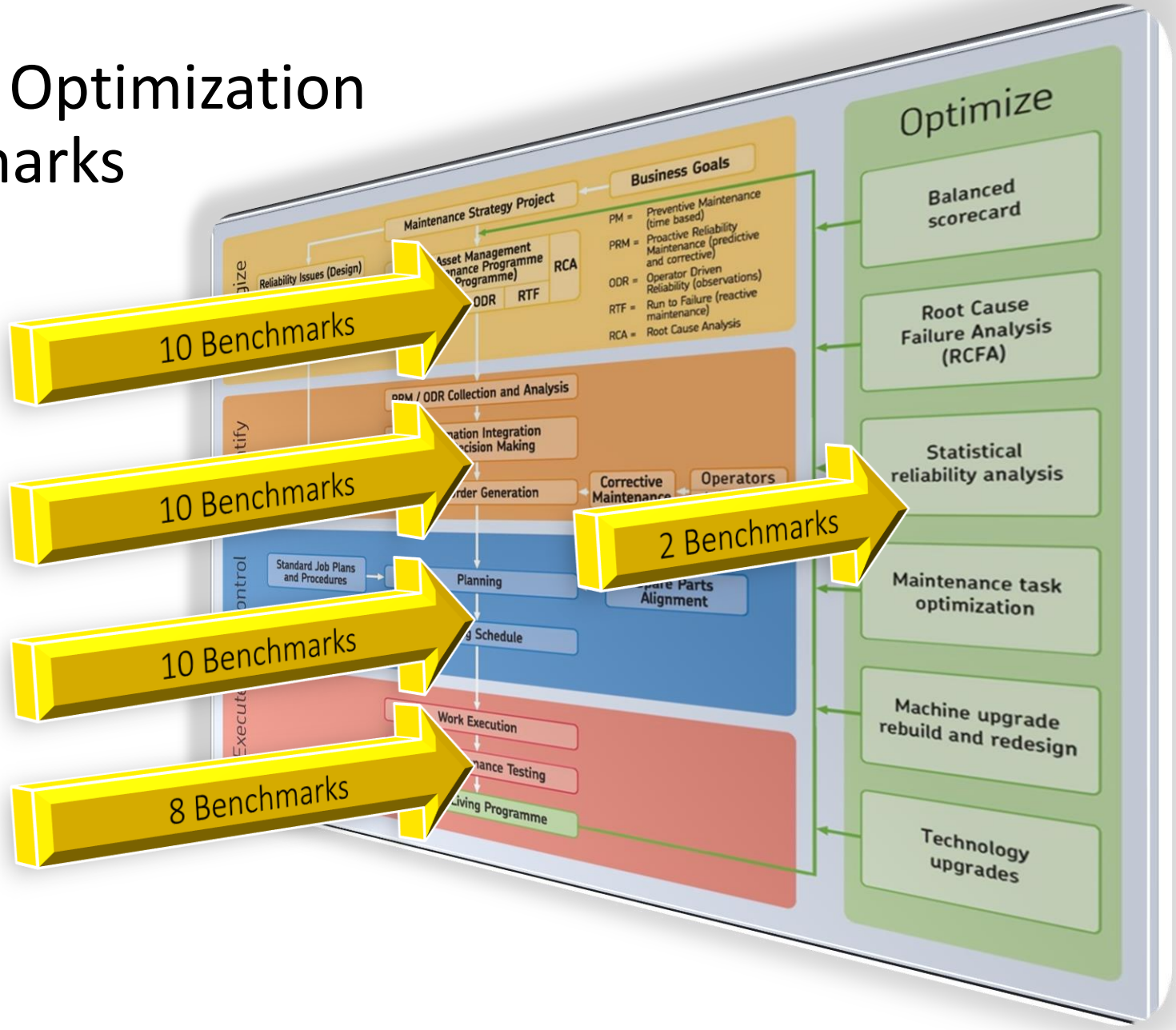
Where do you rank yourselve?



There is ALWAYS room for improvement!

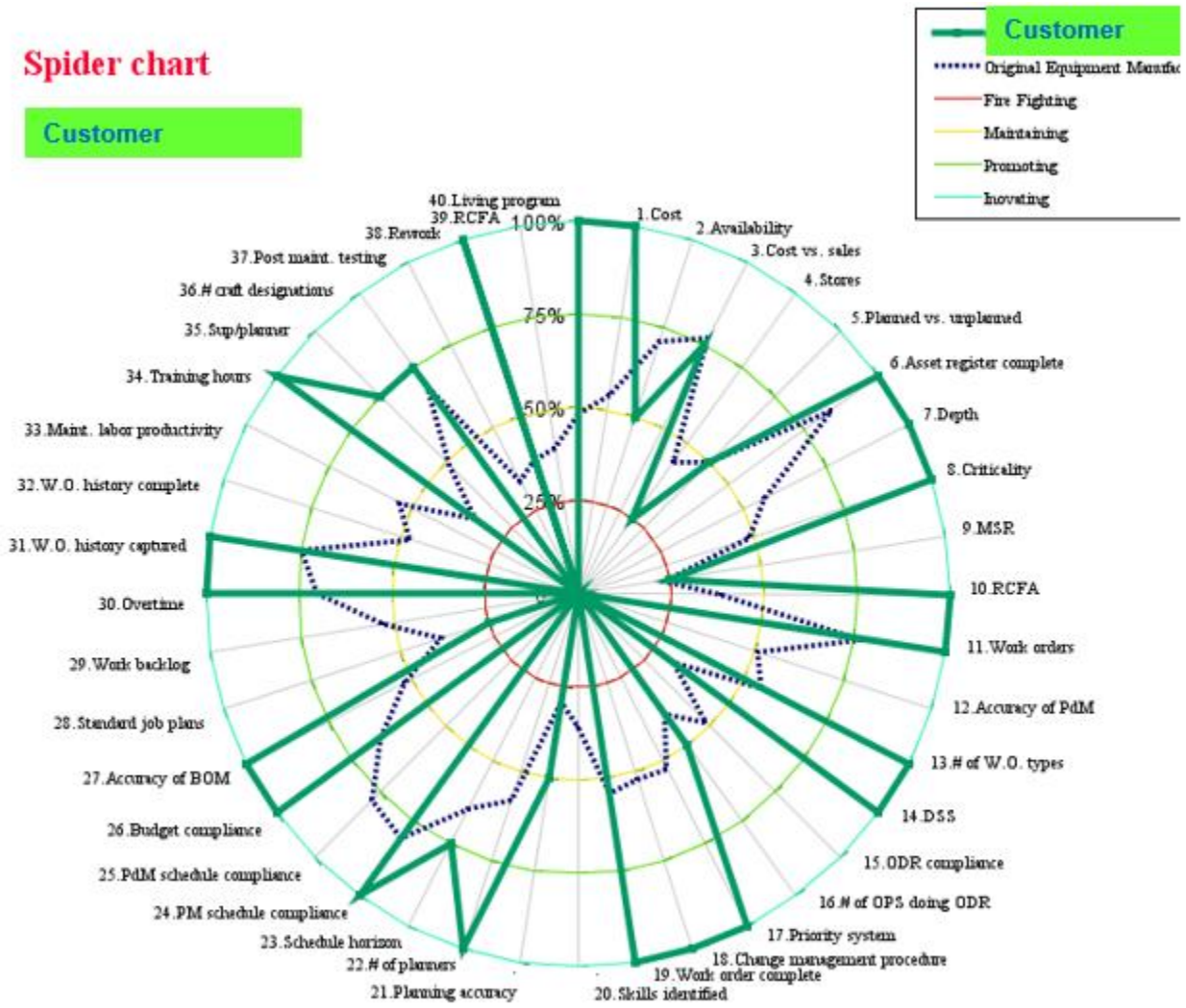
TCO

Asset Efficiency Optimization & Main benchmarks



Results Presentation example

Results


Spider chart
Customer
Customer
Original Equipment Manufac
Fire Fighting
Maintaining
Promoting
Inovating
100%
75%
50%
25%
1.Cost
2.Availability
3.Cost vs. sales
4.Stores
5.Planned vs. unplanned
6.Asset register complete
7.Depth
8.Criticality
9.MSR
10.RCFA
11.Work orders
12.Accuracy of PdM
13.# of W.O. types
14.DSS
15.ODR compliance
16.# of OPS doing ODR
17.Priority system
18.Change management procedure
19.Work order complete
20.Skills identified
21.Planning accuracy
22.# of planners
23.Schedule horizon
24.PM schedule compliance
25.PdM schedule compliance
26.Budget compliance
27.Accuracy of BOM
28.Standard job plans
29.Work backlog
30.Overtime
31.W.O. history captured
32.W.O. history complete
33.Maint. labor productivity
34.Training hours
35.Sup/planner
36.# craft designations
37.Post maint. testing
38.Rework
39.RCFA
40.Living program

Traffic Light

	Question Topic	Industry Best Practice	Customer Results
Maintenance Strategy			
1	Maintenance Budget vs ERV	Less than X %	
2	Overall Availability	More than X%	
3	Maintenance Cost vs Total Sales	Less than X%	
4	Store Value vs ERV	Less than X%	
5	Planned vs Unplanned Maintenance	Between X% - Y%	
6	Asset Register Current / Accurate	More than X%	
7	Asset Register Depth	More than X	
8	Equipment subjected to Criticality Analysis	More than X%	
9	Maintenance Strategy	Between X% - Y%	
10	Root Cause Failure Analysis (RCFA)	Between X% - Y%	

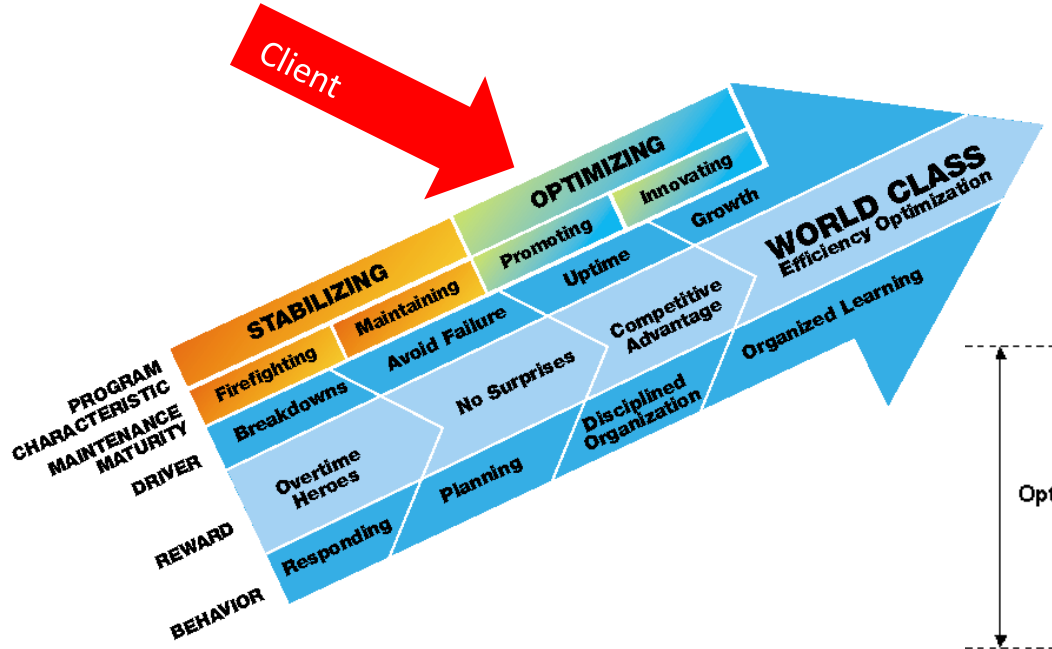
	Question Topic	Industry Best Practice	Customer Results
Work Idenification			
11	Work Order Coverage	Between X% - Y%	
12	Predictive Maintenance (PdM) Program Effectiveness	Between X% - Y%	
13	Work Types	More than X	
14	Decision Support	Between X% - Y%	
15	Operator Care	More than X%	
16	Operator Conducting Preventive Maintenance (PM)	More than X%	
17	Work Order Priority System Criteria	Between X% - Y%	
18	Change Management	Between X% - Y%	
19	Work Order Process	More than X%	
20	Who Will Do Work Well	Between X% - Y%	

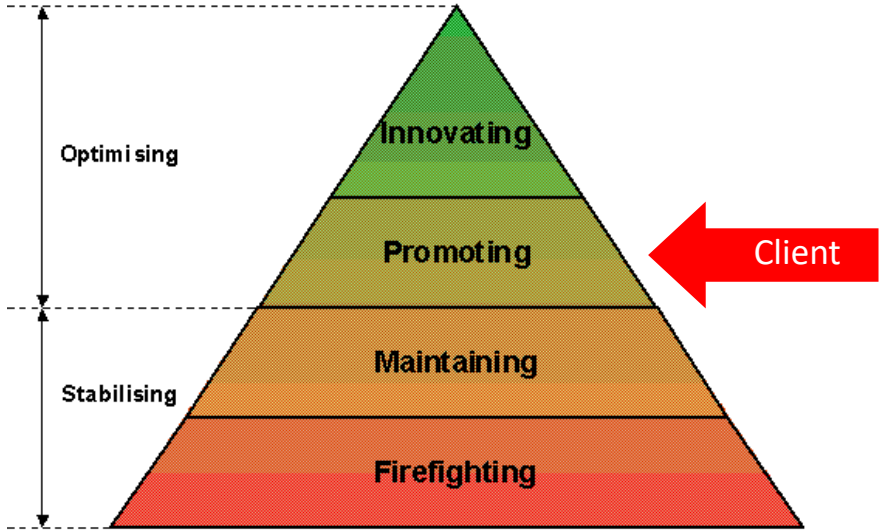
	Question Topic	Industry Best Practice	Customer Results
Work Control			
21	Planning Accuracy	+/- X%	
22	Number of Planners	More than X	
23	Scheduling Horizon	More than X weeks	
24	Preventive Maintenance (PM) Schedule Compliance	More than X%	
25	Predictive Maintenance (PdM) Schedule Compliance	More than X%	
26	Budget Compliance	+/- X%	
27	Bill of Materials	Between X% - Y%	
28	Standard Job Plans (SJP) & Procedures	Between X% - Y%	
29	Work Backlog	Less than X weeks	
30	Overtime Levels	Less than X%	

	Question Topic	Industry Best Practice	Customer Results
Work Execution			
31	Work Orders History	Between X% - Y%	
32	History Practices	More than X%	
33	Maintenance Labor Productivity	More than X%	
34	Training Hours per Maintenance Craft Person	More than X hrs	
35	Supervisor to Craftperson Ratio	More than X	
36	Total Craft Designations	Less than X	
37	Post Maintenance Testing	Between X% - Y%	
38	Maintenance Rework	Less than X%	

	Question Topic	Industry Best Practice	Customer Results
Otimization			
39	Update Program - Breakdown Maintenance	Between X% - Y%	
40	Update Program - PM / PdM	Between X% - Y%	

Where is the CUSTOMER positioned





Illustrates where the CUSTOMER plant situation is, based on the 40 CNA questions

Business case – quantitative (example)

Spare Part Management and Optimization

- Stores value 14,700,000 (3,2% of ERV of 446,000,000)
- Best Practice is <0,3% equals 1,338,000)
- If 1% would be target than opportunity is 10,240,000

Reduce unplanned down time

- Estimated unplanned down time 12,000 * 1.07 hrs = 12,840 hrs
- This implies 12,840 * 92 units = 1,181,280 units
- Cost/unit “no production” = 64 Euro
- Reduction of the unplanned downtime by 50% equals additional production of 590,640 units
- Typically 2 people work on a breakdown, so also maintenance cost will be reduced

Improvement Recommendations

#	Improvement recommendation
1	Asset Management Awareness training for Management
	Asset Management Awareness training for Shop Floor people
2	Initiate Spare Part Management and Optimization project
3	Set up Proactive Reliability Maintenance program
4	Perform a Maintenance Strategy Review
5	Review and improve KPIs'
6	Implement MSR results in CMMS
7	Involve operators in asset care (Operator Driven Reliability)
8	Planning and Scheduling
9	Review and improve PDM program
10	Create standard job plans for all asset management tasks
11	Start using Maximo for full Work Order Process
12	Develop structured approach for continuous improvement
13	Install reliability team

Agree on Improvement Recommendations

#	Improvement recommendation	Agree Y/N
1	Asset Management Awareness training for Management	Y
	Asset Management Awareness training for Shop Floor people	Y
2	Initiate Spare Part Management and Optimization project	Y
3	Set up Proactive Reliability Maintenance program	Y
4	Perform a Maintenance Strategy Review	Y
5	Review and improve KPIs'	Y
6	Implement MSR results in CMMS	Y
7	Involve operators in asset care (Operator Driven Reliability)	Y
8	Planning and Scheduling	Y
9	Review and improve PDM program	Y
11	Start using Maximo for full Work Order Process	Y
12	Develop structured approach for continuous improvement	Y
13	Install reliability team	Y

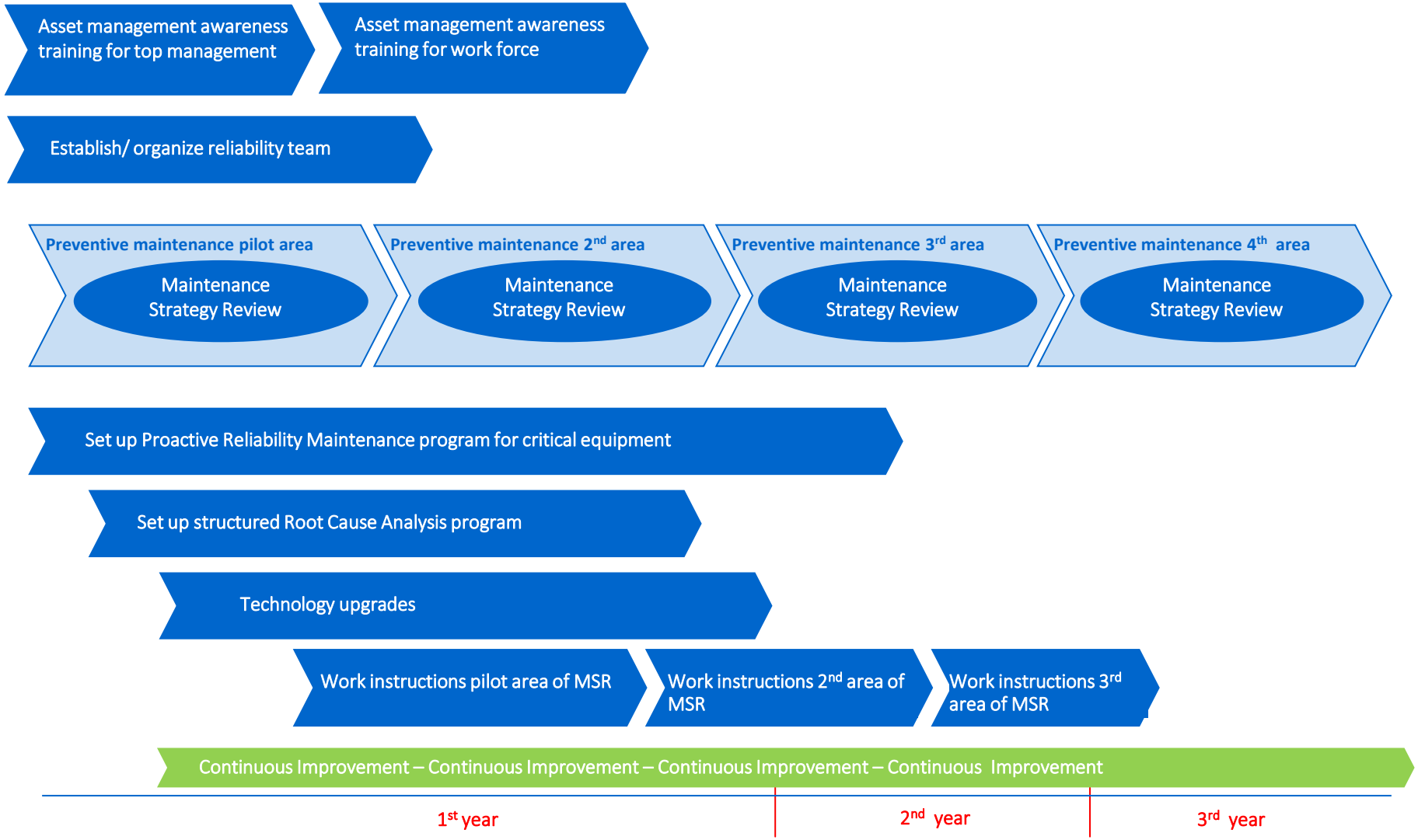
Agreed Improvement Recommendations - prioritized

#	Improvement recommendation	Agree Y/N	Prio H/M/L
1	Asset Management Awareness training for Management	Y	H
	Asset Management Awareness training for Shop Floor people	Y	H
2	Initiate Spare Part Management and Optimization project	Y	M
3	Set up Proactive Reliability Maintenance program	Y	H
4	Perform a Maintenance Strategy Review	Y	H
5	Review and improve KPIs'	Y	H
6	Implement MSR results in CMMS	Y	Res
7	Involve operators in asset care (Operator Driven Reliability)	Y	M
8	Planning and Scheduling	Y	M
9	Review and improve PDM program	Y	L
11	Start using Maximo for full Work Order Process	Y	M
12	Develop structured approach for continuous improvement	Y	H
13	Install reliability team	Y	L

Agreed Improvement Recommendations Prioritized and Ranked

#	Improvement recommendation	Agree Y/N	Prio H/M/L	Ranking
1	Asset Management Awareness training for Management	Y	H	2
	Asset Management Awareness training for Shop Floor people	Y	H	2
2	Initiate Spare Part Management and Optimization project	Y	M	
3	Set up Proactive Reliability Maintenance program	Y	H	5
4	Perform a Maintenance Strategy Review	Y	H	1
5	Review and improve KPIs'	Y	H	3
6	Implement MSR results in CMMS	Y	Res	
7	Involve operators in asset care (Operator Driven Reliability)	Y	M	
8	Planning and Scheduling	Y	M	
9	Review and improve PDM program	Y	L	
11	Start using Maximo for full Work Order Process	Y	M	
12	Develop structured approach for continuous improvement	Y	H	4
13	Install reliability team	Y	L	

The proven Road Map
Start today to begin realizing the benefits



On-Site Assessment Process to increase performance

Client Needs Analysis process

- Introduction Presentation
- Preparation Interview (1 hr)
- Day 1 Workshop
  - Introduction to Senior Management (1hr)
  - Interviews
  - Plant tour
- Day 2 SKF Develops Results Presentation
- Day 3 Results Presentation & Workshop
  - Senior Management and interview team
  - 4 hrs

Results Presentation and Workshop

- Gap analysis
- Recommendations of Improvements

Road Map development

Workshop to lay out a 3 - 5 year Road Map

- Agreement on proposed improvements
- Priority setting
- Ranking of priorities

Approximately 4 hours

Final Presentation incl. Road Map

1 hour Presentation and Review next steps

3

Business Results

SKF has partnered with the customer to increase production

Challenge

- Reduce total cost of ownership
- Reduce breakdowns
- Increase safety
- Increase output

Solution

- Client Needs Analysis
- Performance based contract with monthly fee
- SKF implementing monitoring equipment
- SKF services provided
- Dedicated SKF partner at plant on day-to-day basis

Result

- Increase the availability of rolls to 99.95%
- Improved machine OEE from 48% to 64%
- improved the processes and quality of the final product

Other Successes

Decrease UPMDT to zero in 5 years
Pulp Mill

Reduce Preventive Maintenance routines by 35% - Metals

Increase MTBF from 10 hours to >600 hours
Food & Beverage

Reduce stores value by >$3million over 3 years
Chemical plant

Reduced & sustained a reduction in UPMDT to <1% per year –
Food & Beverage

Reduce bearing consumption by 15% & lubricant consumption by 25% = Metals

implementation of Operator Driven Reliability program
Paper Mill

4

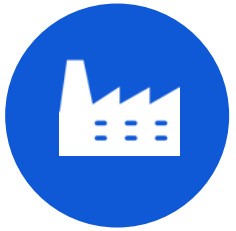
Summary

Typical Business Drivers today

Improved Output & productivity

Reduced total cost of ownership

Retain skills and attract new talent

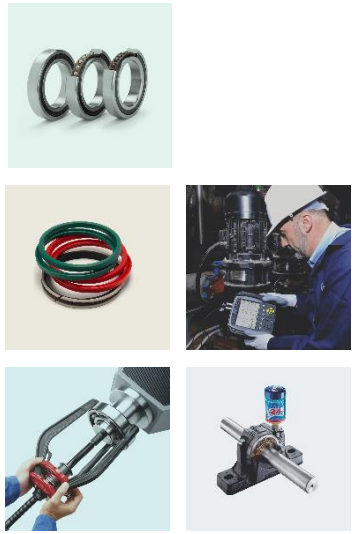


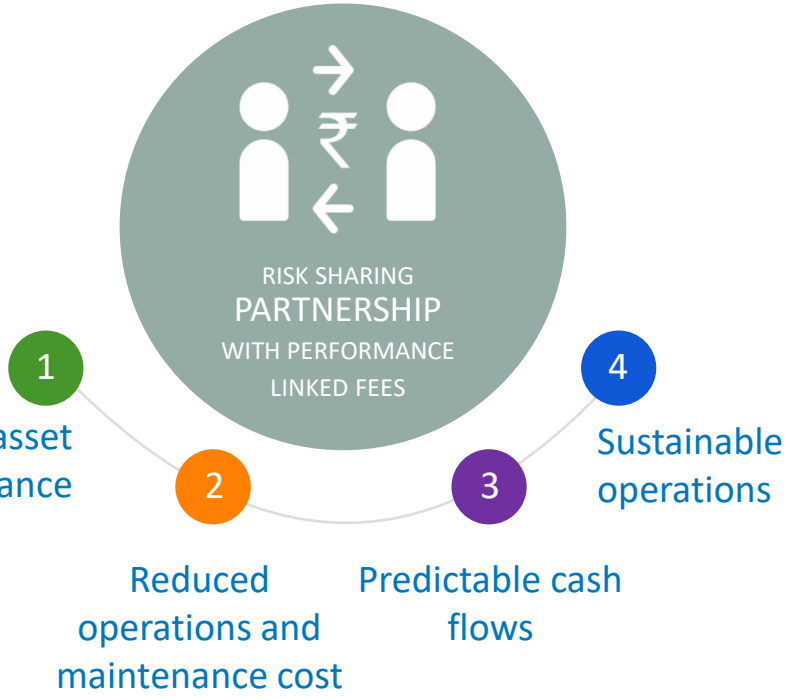
Safe & reliable operations and maintenance

Increased Sustainability

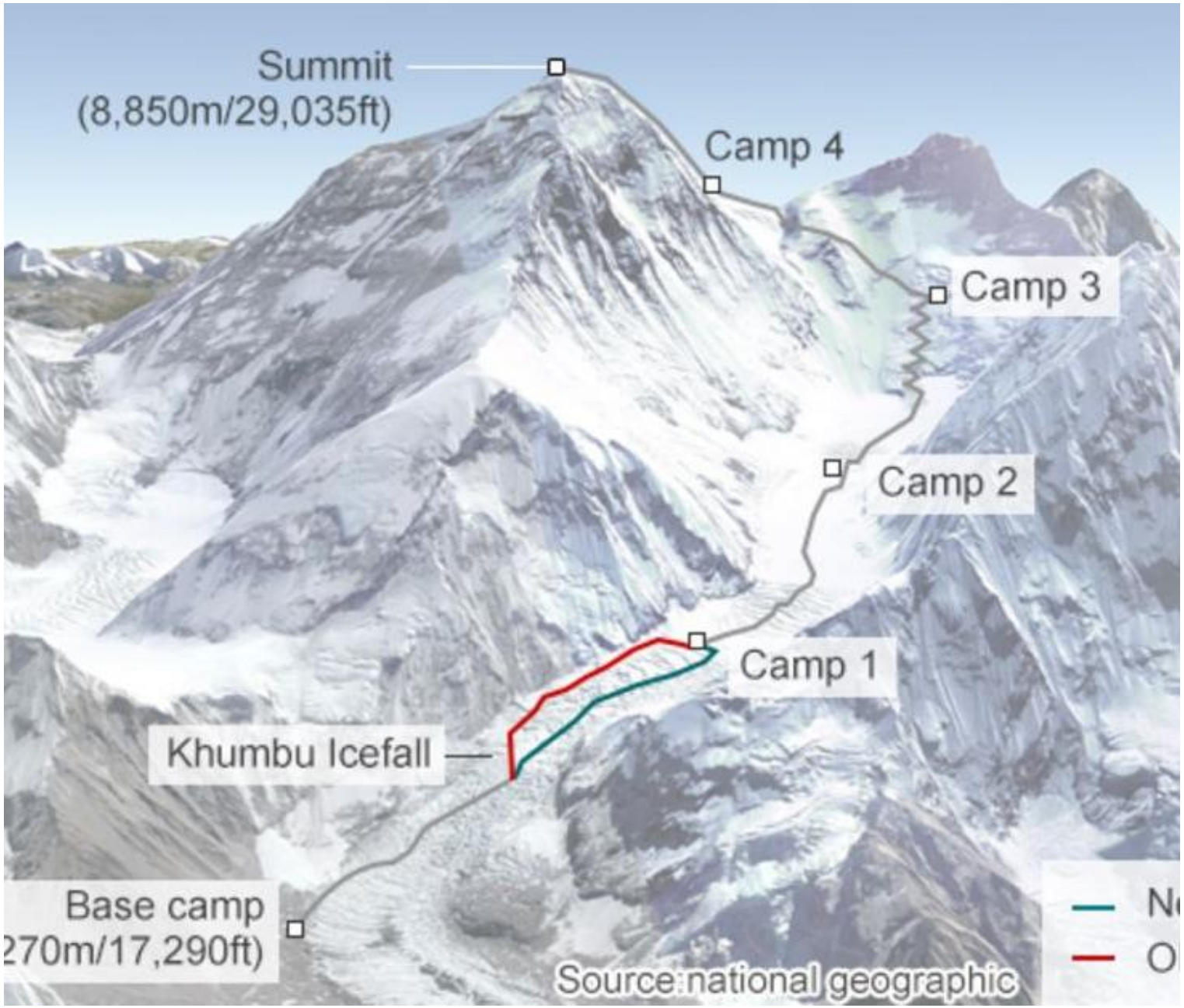
SKF, through its comprehensive portfolio of products and services, supports executives deliver that response

SKF





Your organization



Takk for din oppmerksomhet!

Thank you!


SKF