



Révélez votre potentiel.

SCHMELZMETALL

AN AMPCO METAL COMPANY

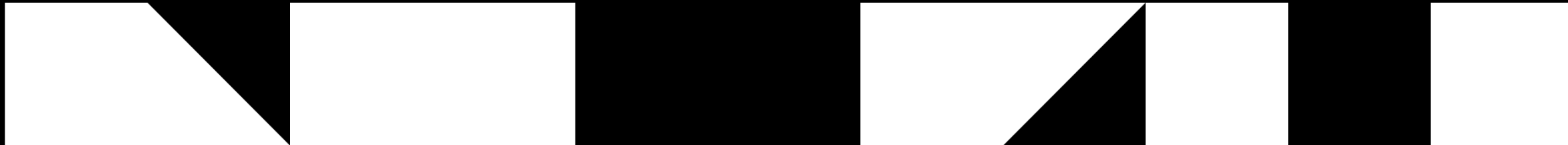
Company visit

End to End flow transformation SMCH – External Operations – SMDE
SMDE Operations Relayout (production – warehouse – offices)

Written by:

Dominique Andreux & Dieter Hahn

April 23rd 2026





**Excellence in
Engineered
Alloys**



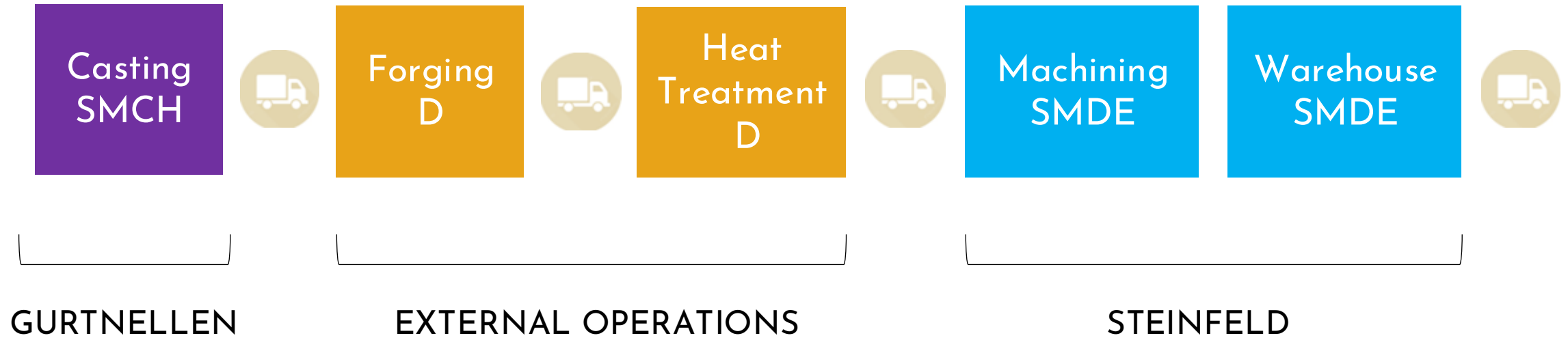
Context & Objective

- AMPCO acquired **SCHMELZMETALL** in Sept 2024, as part of its Business Development strategy, a family owned company highly traditional which became insolvent.
- The main characteristics of SCHMELZMETALL operations are:
 - A kind of **High Mix Low Volume** (HMLV) copper alloys, including development - production - delivery via a network of 3 entities in Switzerland and Hungary (foundries) - Germany (cutting up to finishing, including a logistic hub)
 - Highly specific and **customized** specifications
 - Industrial processes including subcontracted forging / annealing / heat treatment processes, adding significant **flow complexity**, in comparison with usual AMPCO standard processes
- This results in **CASH bleeding and Non - Profitable operations** at SCHMELZMETALL.

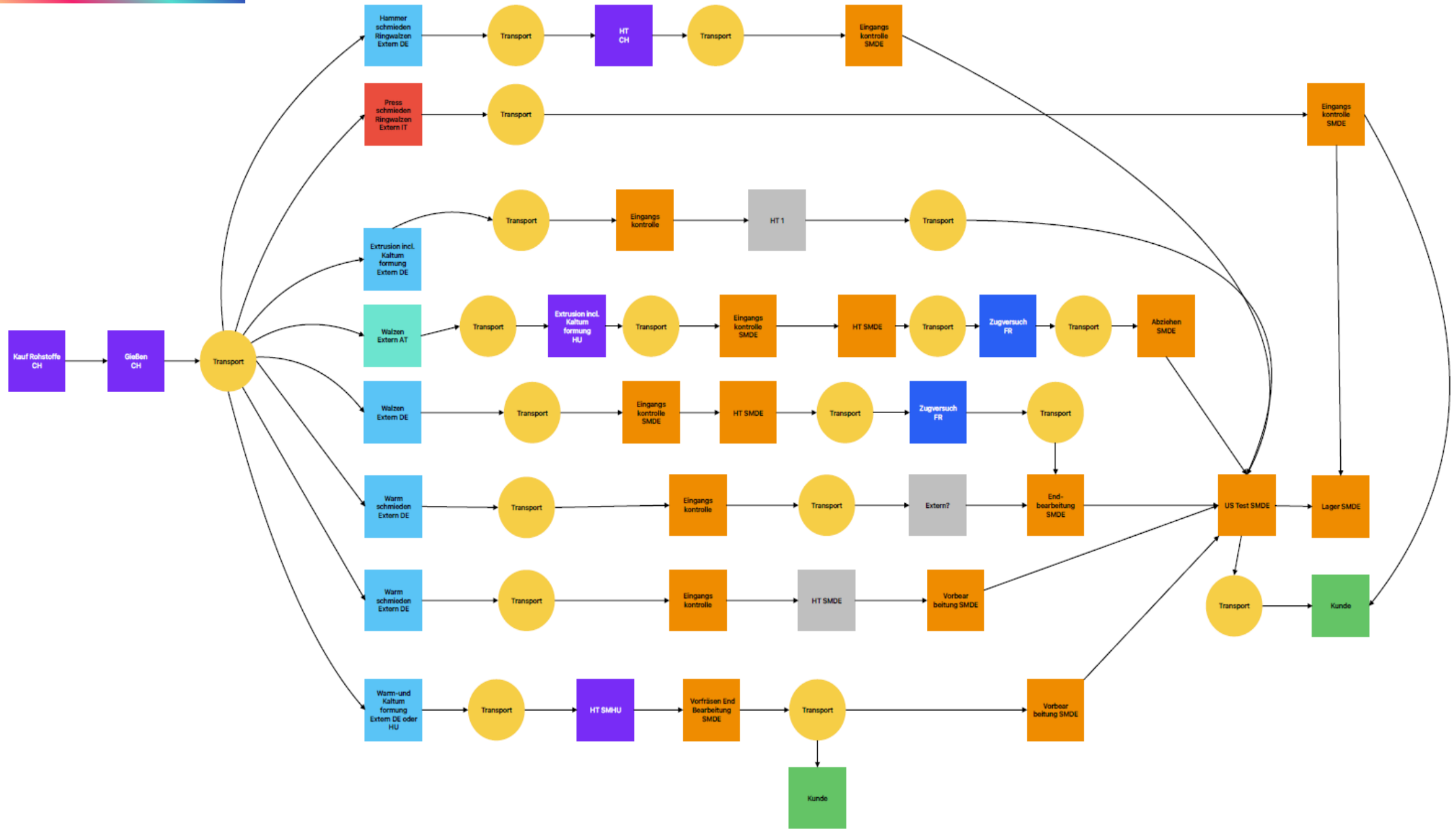
In this context, AMPCO' CEO requested QRE expertise for HMLV operations and agile transformation, through **Quick Response Manufacturing** (QRM) principles, to help in turning SCHMELZMETALL in positive operating income and stopping burning cash.



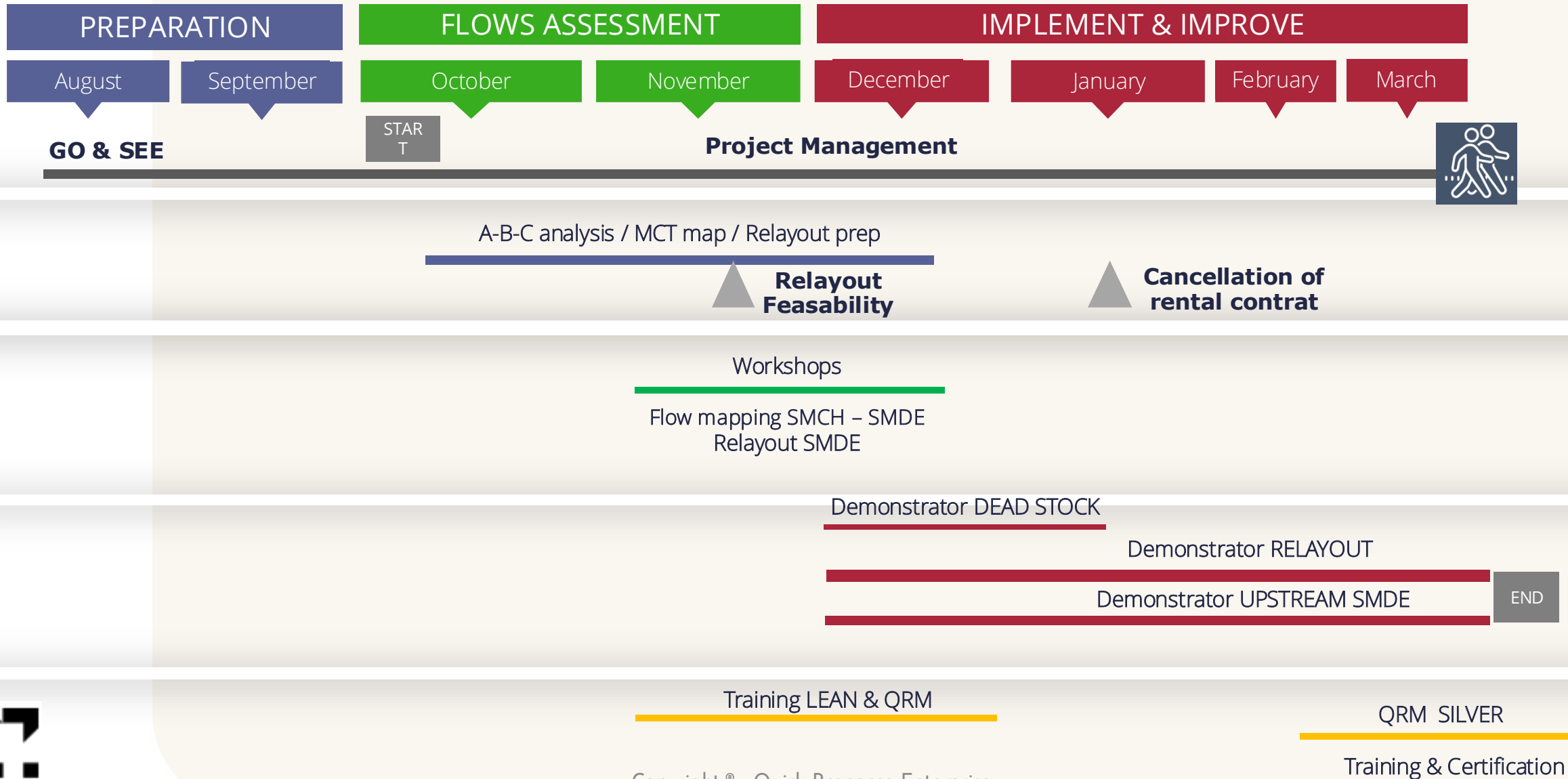
Scope: End to End Flow Transformation



Scope: End to End Flow Transformation



Roadmap in a sequential mode



Governance Set up



Transformation Governance

- Project Governance Structure:

	SCHMELZMETALL	QRE
SPONSORS	Martin Lütenegger	Dominique Andreux
PROJECT LEADERS	Arndt Schmitt Nurdogan Gurkan	Dieter Hahn

- Roles & Responsibilities:

- Sponsors are accountable to reach project deliverables, no matter the circumstances. Efficiency of the Project Steering Committee is their joined responsibility.
- Project Leaders are responsible to execute the defined project activities, in order to reach the project objectives.

- Project Steering Committee:

- Participants: Sponsors - Project Leaders - EVP Procurement & Fulfillment + AdHoc participants upon request
- Mission: orient - validate - decide - prioritize - support - encourage
- Monthly committee



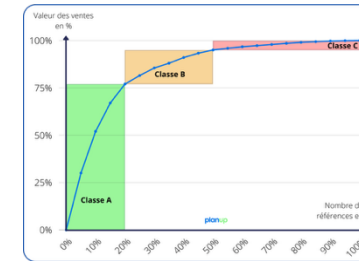
Collect Datatas



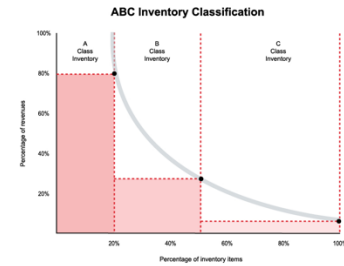
COLLECT INFORMATIONS

Activities	QRE Deliverables	# Consultant	# Consult Days	Total Consult Days
Collect Informations				
Workshop to analyse A-B-C categories of SM products portfolio	Generic Process flow chart per product categories (preparation for Flow Mapping workshop)	2	0,5	2
Analysis of inventory rotation per A-B-C products categories	Visualization of inventory rotation, including dead stock Minimum level of stocks per products categories	2		
Creating MCT for three selected products A-B-C	MCT mapping showing critical path, grey zones / whites zones Highlight opportunities for minimum 50% white zone reduction	1	1	1
Collect technical and legal Informations as a base for planning the layout of the warehouse, production and office.	- Technical Informations about all the machinery and equipment - Drawings from building incl. structural plans - Workplace Directive - Occupational (work place) safety - Requirements from employees for office space	1	2	2
Search and define external companies to support the implementation of the new layout for warehouse, production and office	Designated companies that actively support or partially carry out the implementation	1		
			TOTAL	5

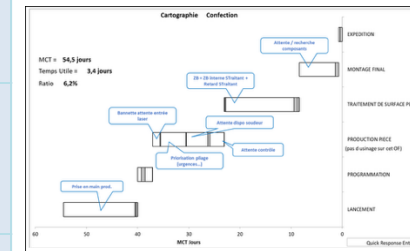
A-B-C Ranking



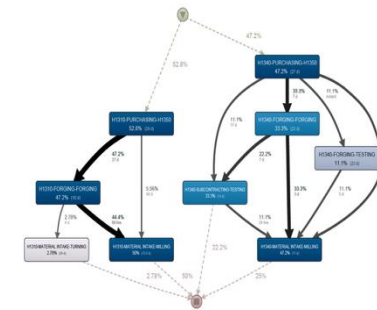
Inventory Ranking



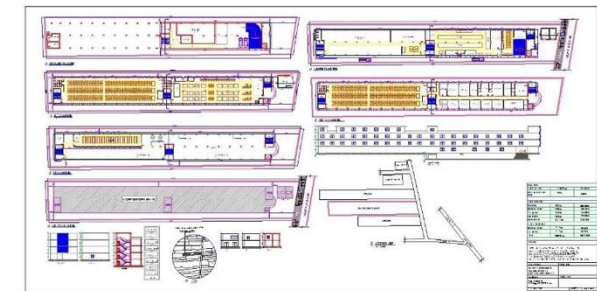
MCT mapping




DISCO visualization



Master Layout

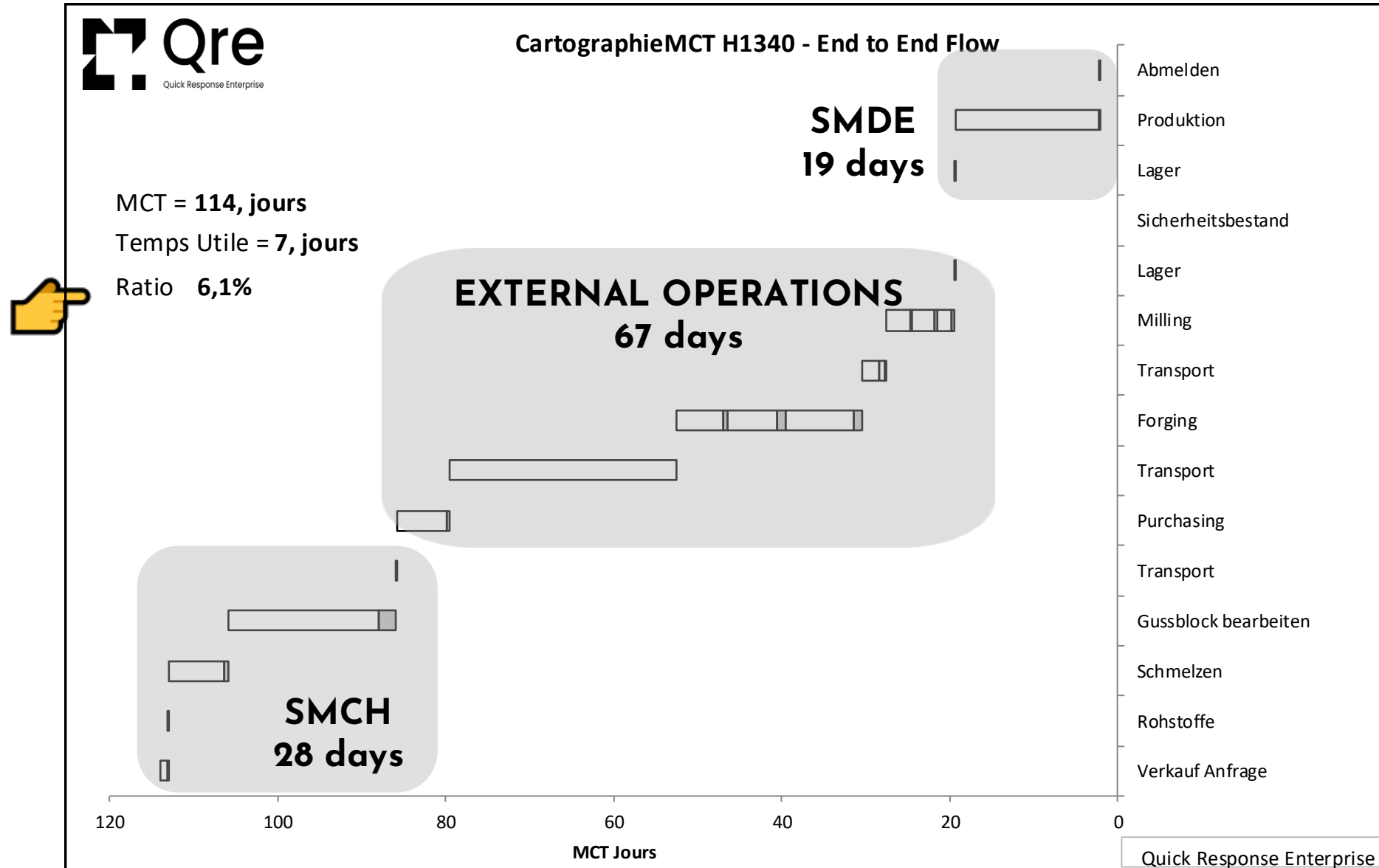


Flow Assessment

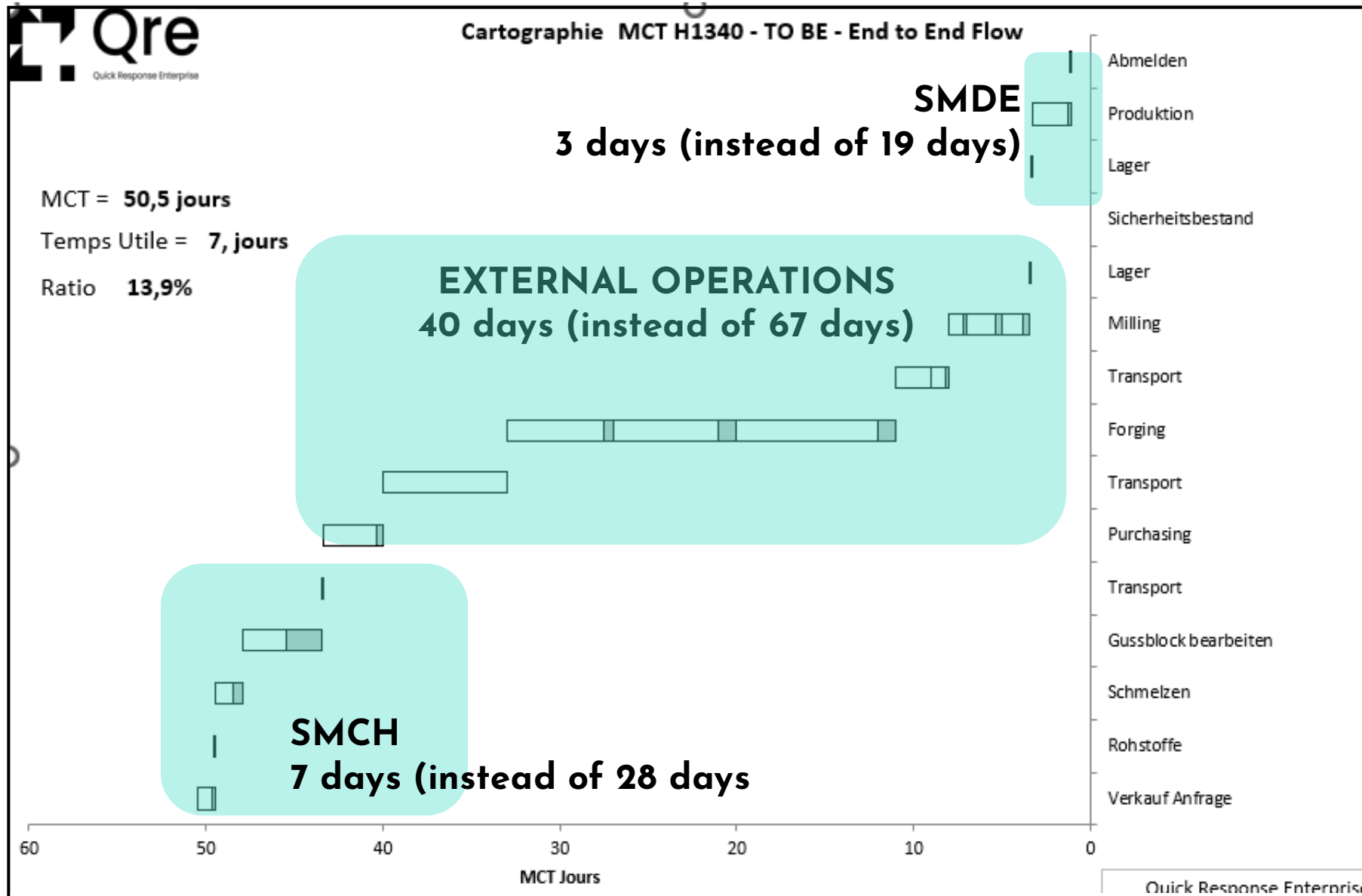
(AS IS  To Be)



MCT – H 1340 – End to End Flow « AS IS » situation



MCT – H 1340 – End to End Flow « TO BE » target



H 1340 – End to End Flow Mapping



Flow Transformation



Flow Transformation Score Card (SteerCo view)

Project Team

Main Objective

MCT Leading KPI

Main deliverables

MCT target



Change

SCHMELZMETALL- CH			Zuordnung Nr. 1	
Leiter: Nurdogan		Team: Peter, Thomas, Marius, Rene		
Startdatum: 19/11/2025		Enddatum: 31/03/2026		
Geplantes RETEX-D: 31/03/2026				
Ziel/Zielvorgabe: Erprobung einer neuen Vorgehensweise vom Eingang der Bestellung bis zur Versandbereitschaft				
Leistungsindikator: Reduzierung der MCT: von 28 Tagen (tatsächlich) auf 7 Tage (Kalendertage)				
Freisetzung von verfügbarer Zeit in der Organisation		Geplant: 4	Geschätzte Arbeitsbelastung für Teammitglieder:	
Stufe 1: 1 Stunde/Woche – Stufe 2: 2 Stunden/Woche – Stufe 3: 3 Stunden/Woche – Stufe 4: 4 Stunden/Woche und mehr		Real	20%/week for Leader	
Reduzierung der weißen Zone		Geplant: 4	10%/week for team members	
Stufe 1: k. A. – Stufe 2 <5 Tage – Stufe 3 <10 Tage – Stufe 4 >10 Tage		Real		
ERGEBNISSE				
Beschreibung der ausgewählten Ergebnisse	Definiertes Ergebnis	Experiment gestartet	Experiment abgeschlossen	Neuer Standard implementiert
Beschreiben Sie die neue Vorgehensweise, um MCT = 7 Tage zu erreichen: TO BE BASIC validiert	O	O	N	N
Implementierung der Durchlaufzeitmessung als führender KPI (automatisch)	N	N	N	N
PROGRESS REPORT				
	Quick Wins			
	Main Actions in progress			
	Decision requested			
CHANGE MANAGEMENT FOCUS				
Obstacles from organisational Structure				
Leadership and Team training to support behavior changes needed				
Management exemplarity to embody attitudes and behaviors				

Work load required

Benefit assessment:

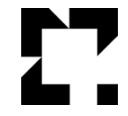
- Time released for people per week
- White zone reduction (days)

Yes/No

Progress Report:

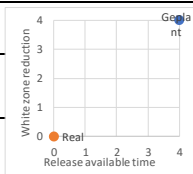
- Quick Wins
- Main actions in progress
- Decision requested

Change assessment:
8 steps of KOTTER



Flow Transformation Score Card (Project Team view)

SCHMELZMETALL- DE				Zuordnung Nr. 3	
Leiter: Arndt		Team: Produktion			
Startdatum:	19/11/2025	Enddatum:	31/03/2026	Geplantes RETEX-D: 31/03/2026	
Ziel/Zielvorgabe: Erprobung einer neuen Vorgehensweise vom Eingang der Bestellung bis zur Versandbereitschaft					
Leistungsindikator: Reduzierung der MCT: von 19 Tagen (tatsächlich) auf 3 Tage (Kalendertage)					
Freisetzung von verfügbarer Zeit in der Organisation		Geplant	4	Geschätzte Arbeitsbelastung für Teammitglieder: 20% / week for Leader	
Stufe 1: 1 Stunde/Woche – Stufe 2: 2 Stunden/Woche – Stufe 3: 3 Stunden/Woche – Stufe 4: 4 Stunden/Woche und mehr		Real			
Reduzierung der weißen Zone		Geplant	4	10%/week for team members	
Stufe 1: k. A. – Stufe 2: <5 Tage – Stufe 3: <10 Tage – Stufe 4: >10 Tage		Real			
ERGEBNISSE					
Beschreibung der ausgewählten Ergebnisse		Definiertes Ergebnis	Experiment gestartet	Experiment abgeschlossen	Neuer Standard implementiert
Beschreiben Sie die neue Vorgehensweise, um MCT = 3 Tage zu erreichen: TO BE RASIC validiert		o	o	N	N
Implementierung der Durchlaufzeitmessung als führender KPI (automatisch)		N	N	N	N
Festgelegtes Datum		---	---	---	---
Bestätigtes Datum		---	---	---	---
MASSNAHMEN					
Nr.	Probleme / Fragen / Zu behandelnde Themen	Ausgewählte Maßnahmen	Verantwortlicher	Wann	PDCA (Typ 1 bis 4)
2	Arbeitspapiere	Prozessbeschreibung für Arbeitspapiere/ Laufkarte erstellen. Welche Informationen sollen auf der Laufkarte angedruckt werden	Arndt	30-janv	●
3	Qualifikation Fräsen	Mitarbeiter für Fräsen qualifizieren	Andy Täuber	ab sofort	●
4	Verpackungsrichtlinien	Erstellen von Verpackungsrichtlinien für den Versand; Punkt herausgenommen	?	30-janv	●
5	Teamboard	Teamboard für Shopfloorbesprechungen installieren	Arndt	23-déc	●
6	Laufkarte	Laufkarte mit allen nötigen Informationen zur Bestellung bereitstellen. Export aus ERP System prüfen	Arndt	ab sofort	●
7	Shopfloorbesprechung	Einführen einer Shopfloorbesprechung zur täglichen Abstimmung über das Tagesgeschäft. Uhrzeit 8:00 Uhr	Arndt	ab 01..12.25	●

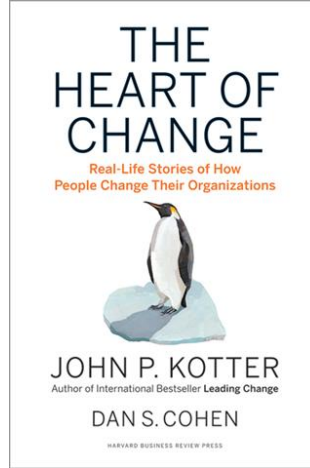


PDCA tracking:

- Detailed actions
- Actionable from HERE and NOW
- Weekly follow up



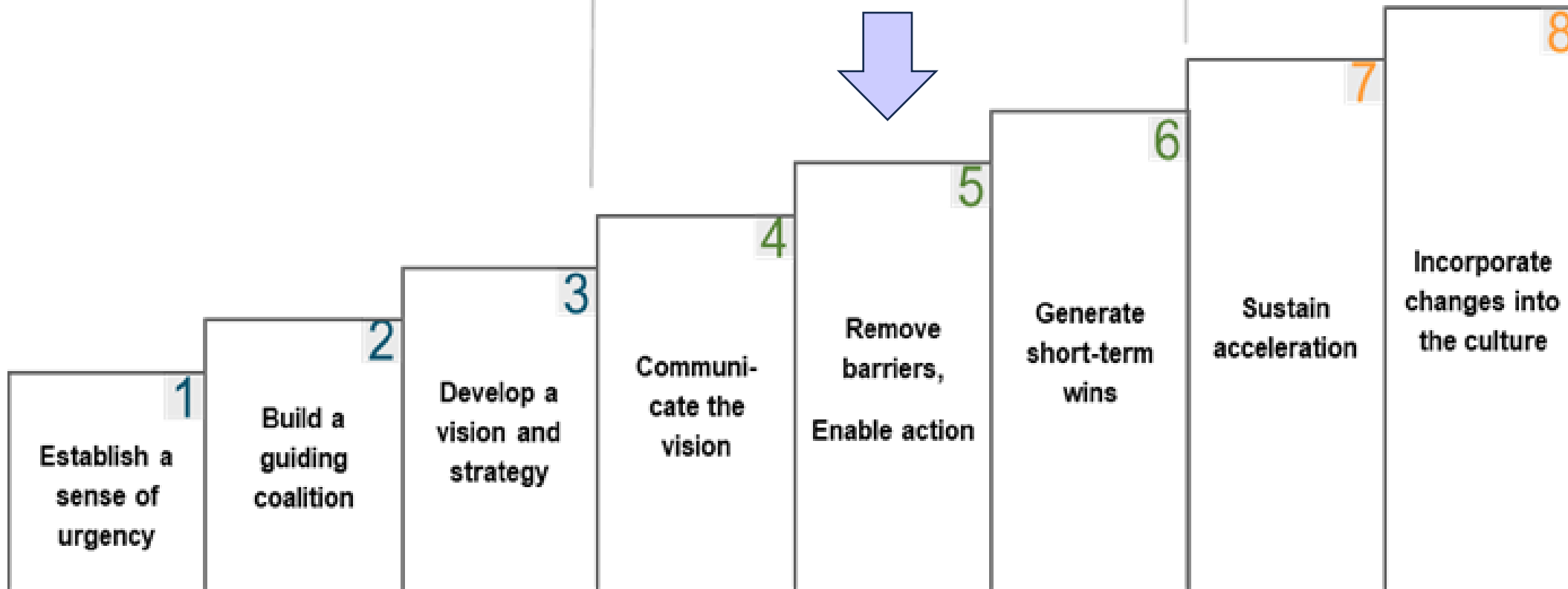
Change Management during Flow Transformation



Create the climate for change

Engage and enable the Transformation

Implement and sustain change

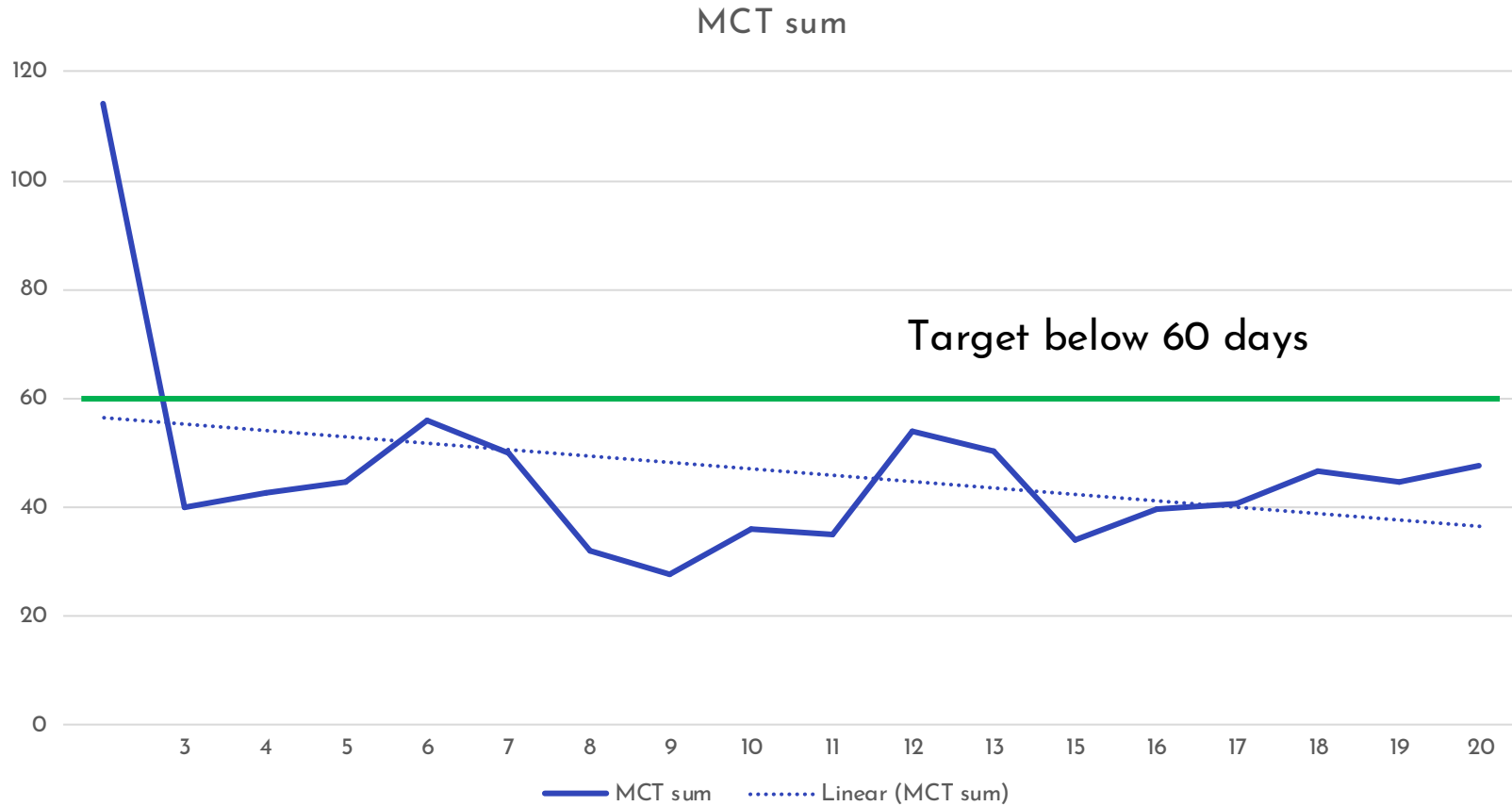


Tangible Results



MCT evolution

KPI impacted	Potential Progress	Measurement	Potential Savings	QRE Contribution & Deliverables	SCHMELZMETALL Contribution & Deliverables
Total Flow Time reduction: MCT less than 60 days	50% reduction (from 114 days towards 50 days)	From first 5 orders passed to SMCH in April 2026, then measure from End to End	Additional sales (not calculated) inventory reduction (see below)	Animation and Facilitation of End to End flow transformation SMCH - Purchasing + External Operations + SMDE	Arndt & Nurdogan accountable for the "make it happen" of the scorecards

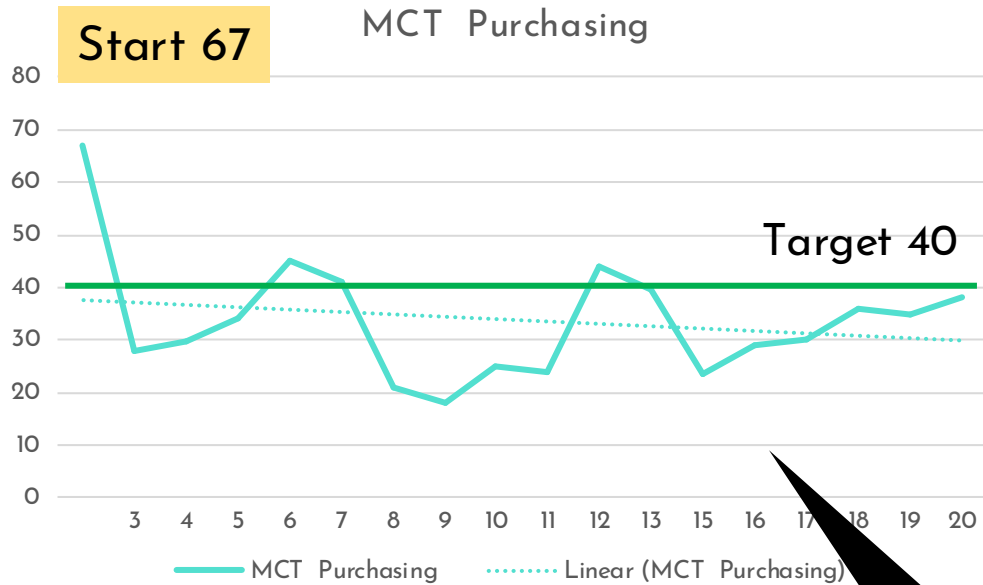


MCT Reduction
by - 69%

MCT mapping



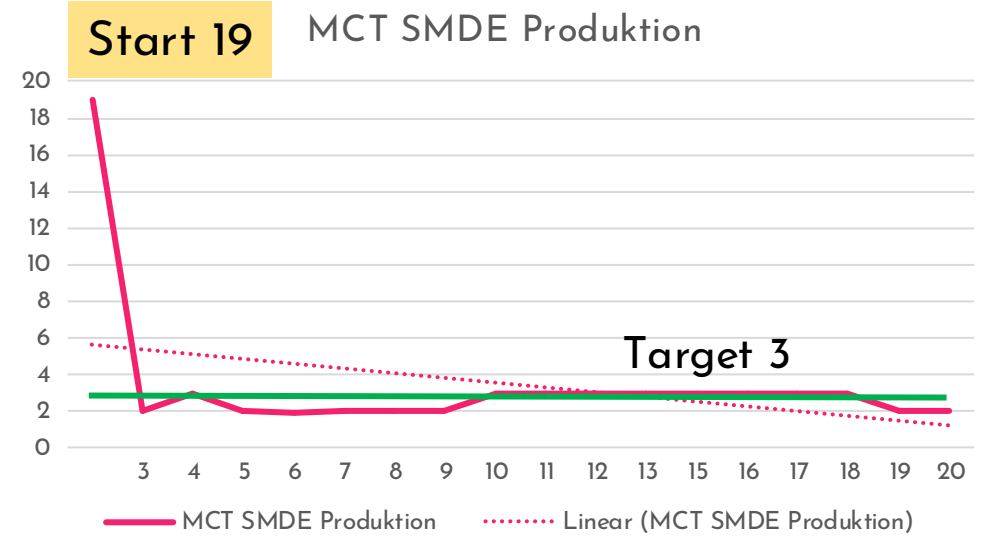
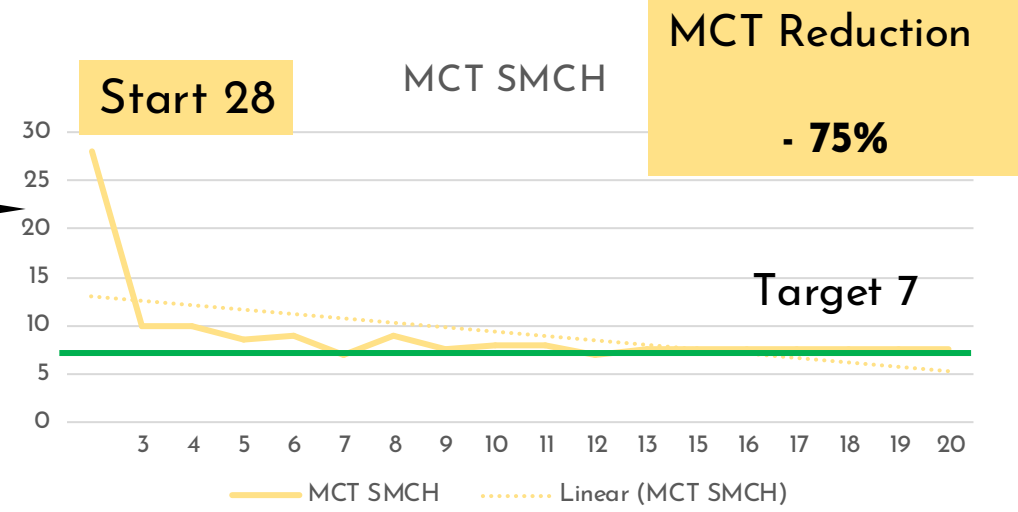
MCT evolution



MCT Reduction
- 43%

Stable reliable process

- Process is getting more stable
- Needs more attention to Planning and Manufacturing execution.
- Still high tresistance to change



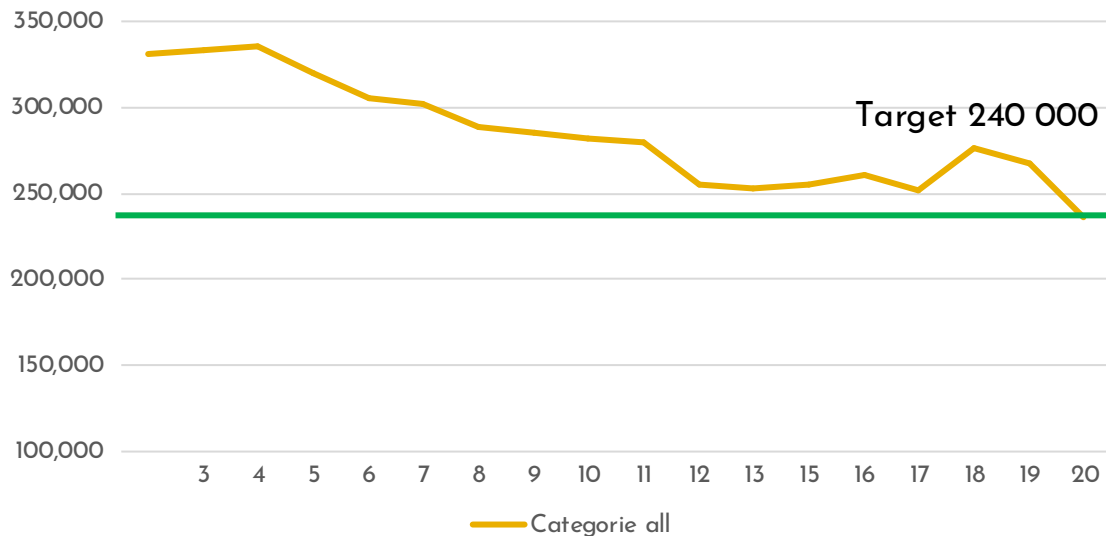
MCT Reduction
- 89%



Inventory Reduction – Inventory Categories

KPI impacted	Potential Progress	Measurement	Potential Savings	QRE Contribution & Deliverables	SCHMELZMETALL Contribution & Deliverables
Inventory reduction (A & B) items Reordering point calculation (from 77 days to 50 days)	A items <input type="checkbox"/> -30 Tons (-23%) B items <input type="checkbox"/> -5 Tons (-23%)	Available inventory April 2026 compared to Dec 22nd 2025 inventory position	614 K€ 114K€	Flow transformation scorecard animation & facilitation Flow transformation scorecard animation & facilitation	Lorena & Michael accountable of Master data quality Arndt & Nurdogan accountable for the "make it happen" of the scorecards
Raw material scraps reduction	From 50 Tons to 25 Tons	From April 2026 scraps measurement in comparison with Dec 22nd scraps position	25 K€	<u>Set up a process to secure the following principle between SMDE & SMCH:</u> Scraps produced = Scraps reused (rolling month period of time) Weekly monitoring	Arndt & Nurdogan accountable for the "make it happen" of the scorecards, following the PUSH mode rule established
<u>C items reduction & valorisation:</u> Finished machine parts Unreserved plates Unreserved round	From 60 Tons down to below 30 Tons (50% reduction and 5% sales margin) Actual = 14 to Actual = 7 to Actual = 39 to	From Q2 2026, C items inventory measurement in comparison with Dec 22nd C items position	730 K€	<u>O-ROC animation and facilitation:</u> Sales - Purchasing - Operations Committed Plan and weekly monitoring	Matthias accountable with dedicated Sales representatives dedicated for "Make it happen"
TOTAL INVENTORY REDUCTION (A/B items + C items + Raw material)	-90 Tons (or -26%)		1483 K€		

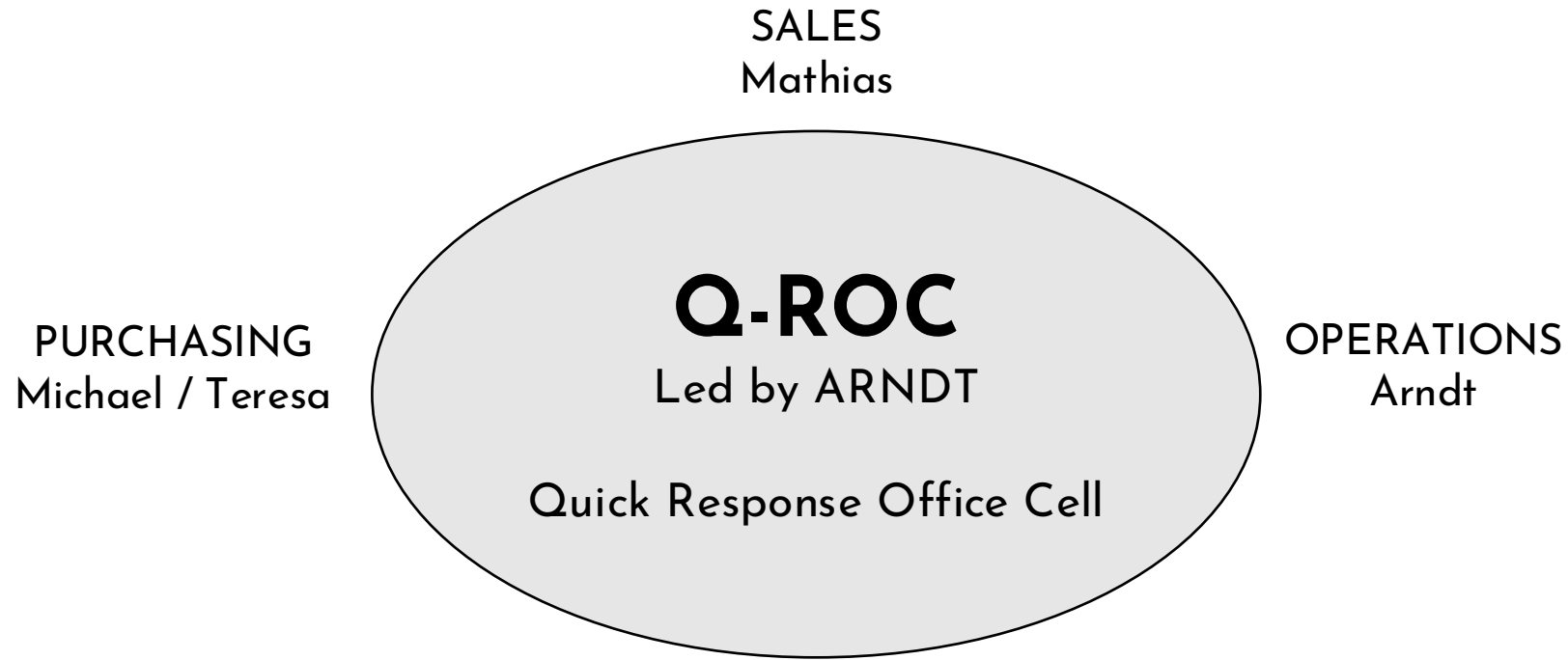
Categorie all



Inventory reduction:
by - 94,5 Tons out of 90to
(105% of the objective)
Reduction: ?? K€



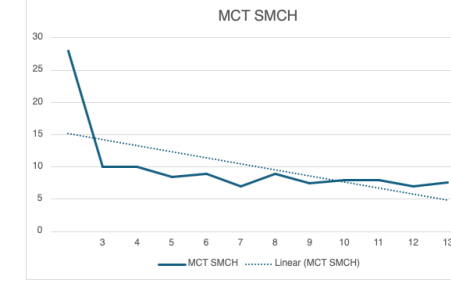
Inventory management led by a Q-ROC



- DEAD STOCK older than 2 years = 1,4 Mios €
- C Items conversion to the nearest B items= 2,3 Mios €
- U items = 1,6 Mios €



SMCH - Flow Transformation Score Card



SCHMELZMETALL - CH		Zuordnung Nr. 1		
Leiter: Nurdogan	Team: Peter, Thomas, Marius, Rene			
Startdatum: 19/11/2025	Enddatum: 31/03/2026	Geplantes RETEX-E 31/03/2026		
Ziel/Zielvorgabe: Erprobung einer neuen Vorgehensweise vom Eingang der Bestellung bis zur Versandbereitschaft				
Leistungsindikator: Reduzierung der MCT: von 28 Tagen (tatsächlich) auf 7 Tage (Kalendertage)				
Freisetzung von verfügbarer Zeit in der Organisation Stufe 1: 1 Stunden/Woche – Stufe 2: 2 Stunden/Woche – Stufe 3: 3 Stunden/Woche – Stufe 4: 4 Stunden/Woche und mehr	Geplant: 4 Real: 4	Geschätzte Arbeitsbelastung für Teammitglieder: 20% / week for Leader		
Reduzierung der weißen Zone Stufe 1: 1, 4, 6 – Stufe 2: 4, 7 Tage – Stufe 3: 4, 10 Tage – Stufe 4: 4, 10 Tage	Geplant: 4 Real: 4	10%/week for team members		
ERGEBNISSE				
Beschreibung der ausgewählten Ergebnisse	Definiertes Ergebnis	Experiment gestartet	Experiment abgeschlossen	Neuer Standard implementiert
Beschreiben Sie die neue Vorgehensweise, um MCT = 7 Tage zu erreichen: TO BE RASIC validiert	o	o	o	o
Implementierung der Durchlaufzeitmessung als führender KPI (automatisch)	o	o	o	o
PROGRESS REPORT				
		Quick Wins	Pre-production of 8 CCNB cast ingots (6.5 tons of cathodes) Golden rules are defined	
		Main Actions in progress	KPIs will be visualized transparently and discussed with employees: revenue, sick leave, MCT (Measures Competitiveness), committee work, qualification matrix, suggestions for improvement, inventory levels, delivery reliability. It should be done in 2 steps Set the numbers for determining MCT from the system. CCNB + CB2 plates	
		Decision requested	Matrix with Roles and responsibilities will be defined in detail	
CHANGE MANAGEMENT FOCUS				
		Obstacles from organisational Structure		
		Leadership and Team training to support behavior changes needed		
		Management exemplarity to embody attitudes and behaviors requested	Beyond clarification of roles & responsibilities, Managers On Job Training & Coaching is needed to embody attitudes and behaviors needed for successful transformation	

What are the changes implemented?

- Pre-production of 8 CCNB cast ingots (6.5 tons of cathodes) Golden rules are defined

What are the next changes to come?

- KPIs will be visualized transparently and discussed with employees: revenue, sick leave, MCT (Measures Competitiveness), committee work, qualification matrix, suggestions for improvement, inventory levels, delivery reliability. It should be done in 2 steps Work will continue with 5S workshops for the remaining hall area
- Set the numbers for determining MCT from the system. CCNB + CB2 plates
- Matrix with Roles and responsibilities will be defined in detail

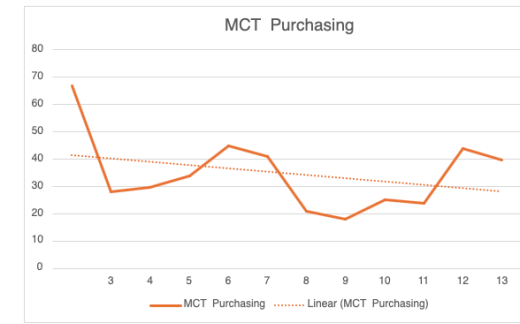
What are the obstacles identified?

- MCT stability is compromised by the uncertainty surrounding how many batches can be cast from a single crucible or mold.
 - Crucible breakage = downtime of 4 days
 - Mold breakage = downtime of up to 4 week

GO & LISTEN to SMCH Team



SMDE Purchasing – Flow Transformation Score Card



What are the changes implemented?

- Weekly sales meeting Monday 11:30 is implemented
- Offers of semi-finished products sent to branches
- Deadline tracking and evaluations; the program increasingly uses leftover pieces.
- Process description: Purchase orders were created

What are the next changes to come?

- Cross-training is defined and will be further developed
- Continue tracking sales with remaining stock list / define
- Optimizing material usage

What are the obstacles identified

- Difficult inventory reduction due to weak markets and large quantities
 - CCNB-CCNB-EH

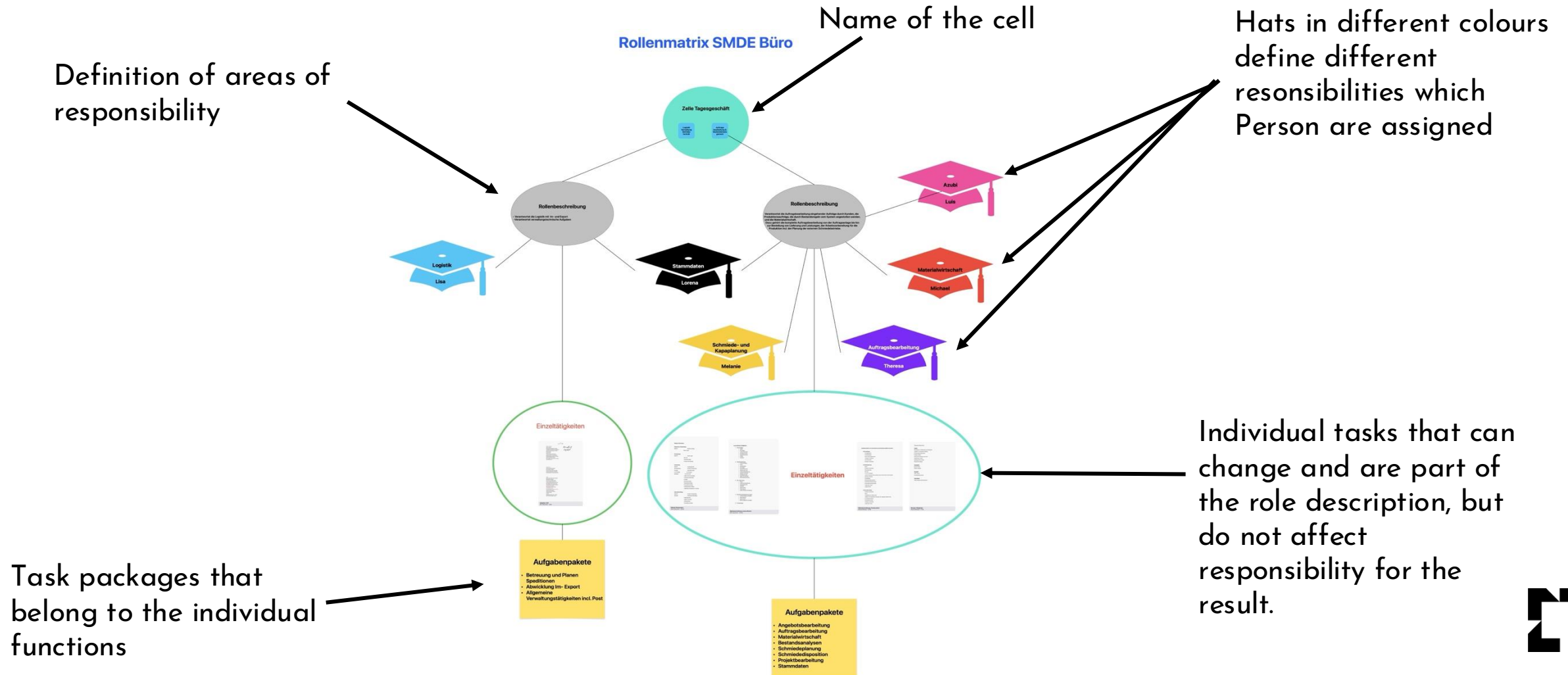
SCHMELZMETALL - CH / DE		Zuordnung Nr. 2		
Leiter: Amdt - Nurdogan		Team: Melanie, Theresa, Michael, Andre, Milan, Mathias, Thomas (CH)		
Startdatum: 18/11/2025	Erstellung: 18/08/2025	Gepostet: RETEX-C 21/09/2025		
Zielvorgabe: Erprobung einer neuen Vorgehensweise für den Bestellprozess CCNB und CCNB EH				
Leistungsindikator: Reduzierung der MCT. Von 67 (tatsächlich) auf 40 Tage (Kalendertage)				
Erreichung und vollständige Ggf. in der Organisation Ggf. 11 Stunden - MCT 2 Stunden - Ggf. 21 Stunden - Ggf. 4 Stunden - Ggf. 10	Aufwand Ziel Istwert	Verbleibende Anwesenheit für Teammitglieder 20% week for Leader 20% week for team members		
ERGEBNISSE				
Beschreibung der ausgewählten Ergebnisse Beschreiben Sie die neue Vorgehensweise, um MCT = 40 Tage zu erreichen: TO RE BASIC validiert Implementierung der Durchlaufzeitmessung als führender KPI (automatisch)	Definiertes Ergebnis	Experiment gestartet	Experiment abgeschlossen	Near Standard implementiert
	o	o	o	o
	o	o	o	o
PROGRESS REPORT				
	Quick Wins	Weekly sales meeting Monday 11:30		
	Main Actions in progress	Offers of semi-finished products sent to branches		
		Cross-training and Aufbereitungen, Data Programm in verbleibende verbleibende Reststrukturen		
	Decision requested	Cross training is defined and will be further developed		
	Continue tracking sales with remaining stock list / define			
CHANGE MANAGEMENT FOCUS				
	Obstacles from organizational structure	Difficult inventory reduction due to weak markets and large quantities (Parameter: CCNB-CCNB-EH)		
	Leadership and Team readiness to support behavior changes	High motivated Team, willing to propose and experiment new way of operating		
Management: exemplarity to embody attitudes and behaviors requested				

GO & LISTEN to SMDE Team



Role Matrix Standard – Legend

The role matrix visualizes the systemic composition and networking of individual areas (cells) and their respective responsibilities. It defines which person is responsible for specific topics. And it shows how individual tasks are grouped into task packages.



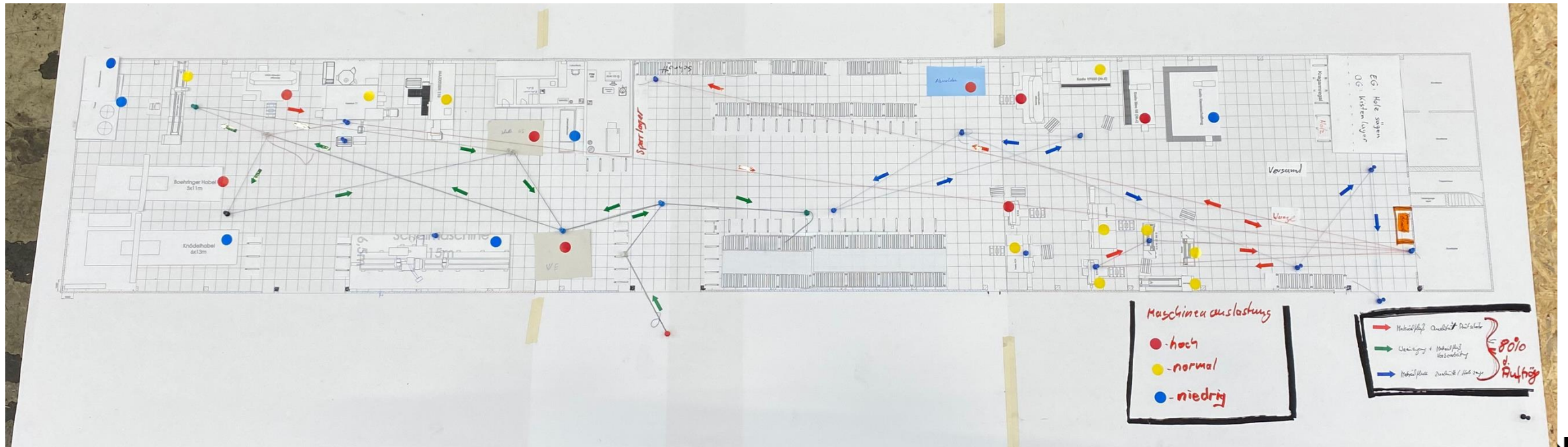
Relayout SMDE



Relayout

Final Layout

- Reducton Lead Time from 19 days to 3 days
- All the activities are in one building
- Material handling distances will be reduced by 70%
- Production distances will be reduced by approximately 50%
- Materials can be provided directly near by the workplace
- Stock reduction about 40% is necessary
- The throughput can be at least three times higher due to the reduction of white space



Training & Continuous Improvement

Including
Best Practices transfer
in AMPCO Group

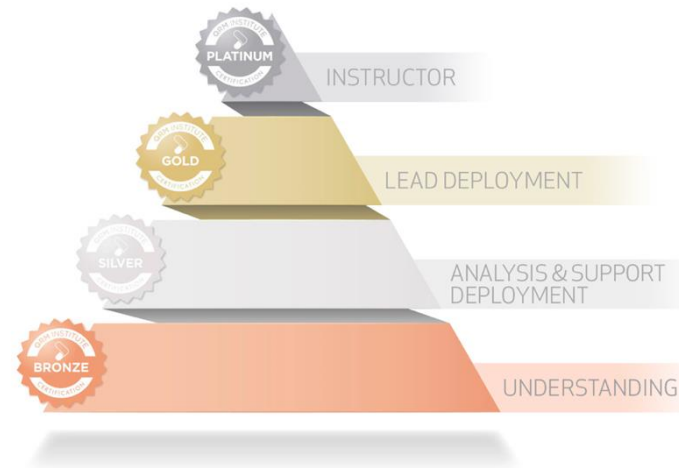


INVEST IN PEOPLE: Training LEAN & QRM

Hands on practical training , to apply in flows transformation



QRM Institute Certification



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→ **SMDE:**

QRM Training: 17/12 - 18/12

→ **SMCH:**

QRM Training: 03/12 - 04/12

TRAINING

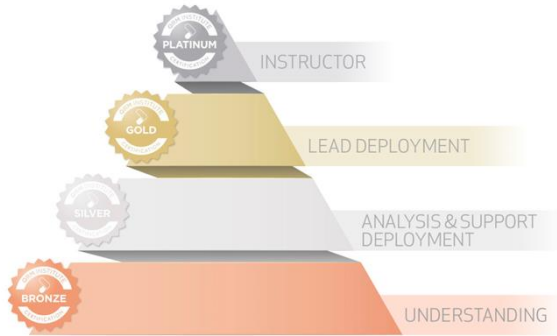


INVEST IN PEOPLE: QRM Institute SILVER Training

To become QRM Transformation Leader



QRM Institute Certification



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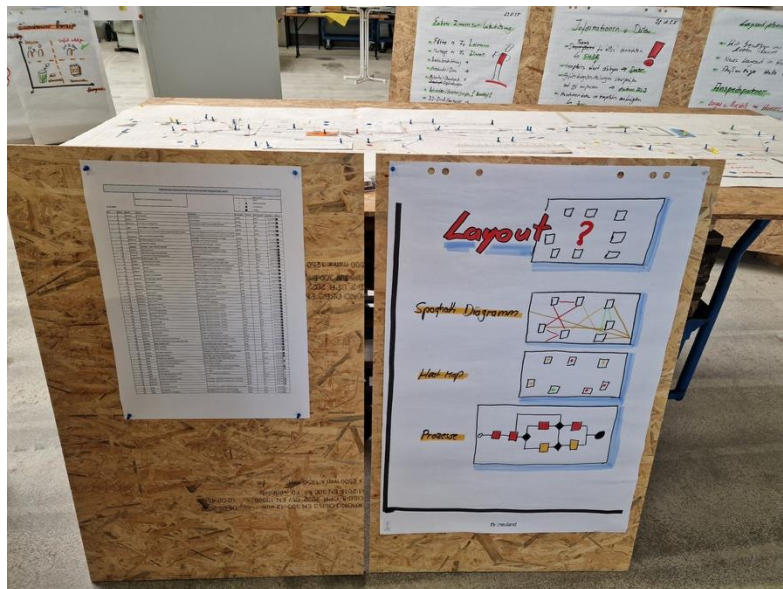
TRAINING



DEMONSTRATED LEADERSHIP during QRM Institute visit (april 24th 2026)



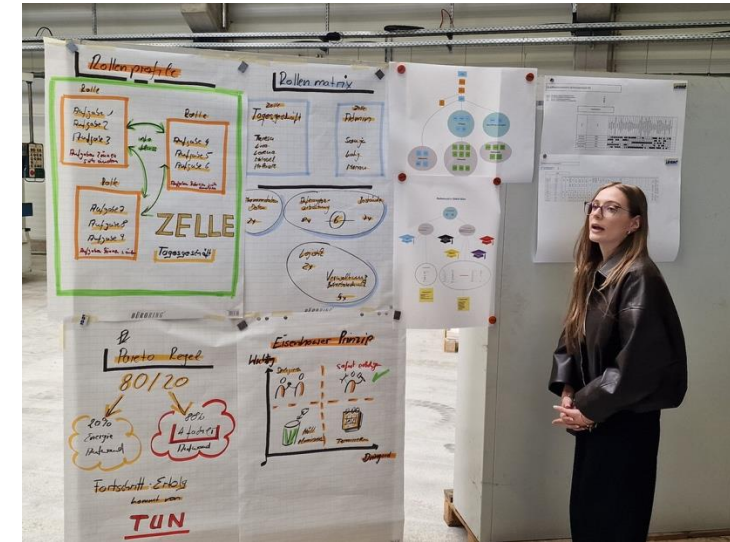
DEMONSTRATED LEADERSHIP during QRM Institute visit (april 24th 2026)



DEMONSTRATED LEADERSHIP during QRM Institute visit (april 24th 2026)



CEO and Team demonstrated ownership



DEMONSTRATED LEADERSHIP during QRM Institute visit (april 24th 2026)



Révélez votre potentiel.

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