



Why structured
operational excellence
and innovation
are critical to
Maxion Wheels' KPIs





Maxion Wheels At A Glance

Maxion Wheels is the world's largest wheel producer.

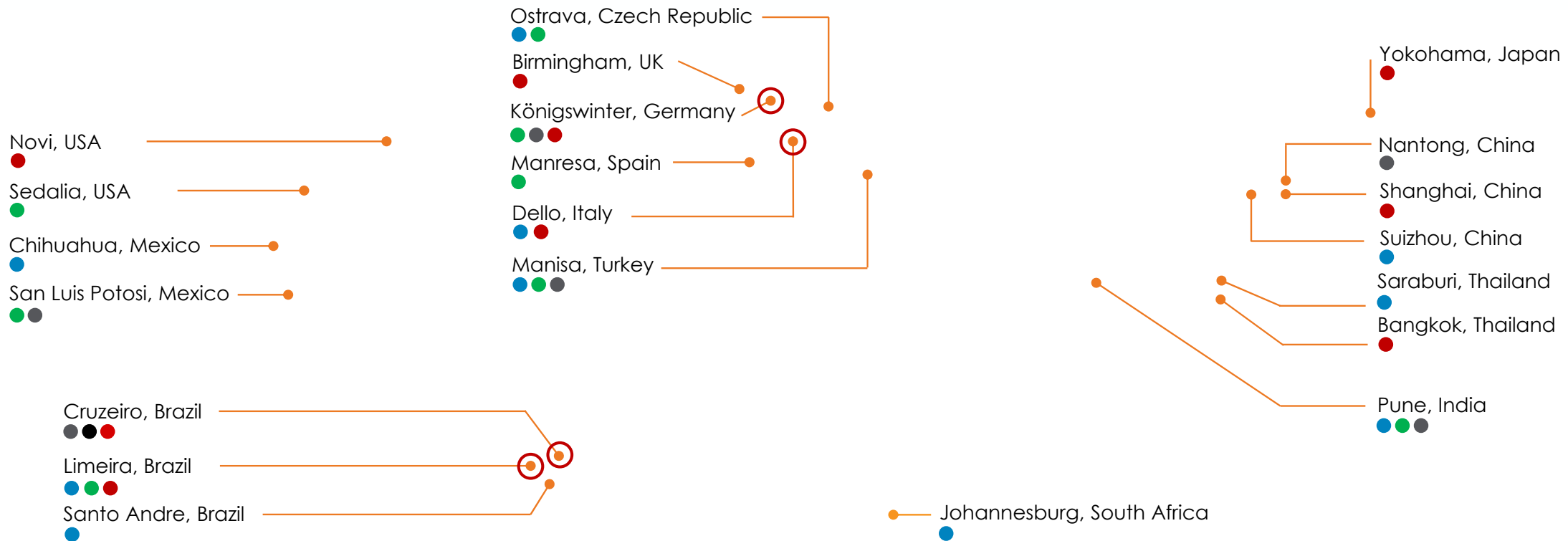


50M wheels • 23 plants • 10,000 employees
Light Vehicle Aluminum and Steel • Commercial Vehicle Steel • Off-Road Steel



Maxion Wheels At A Glance

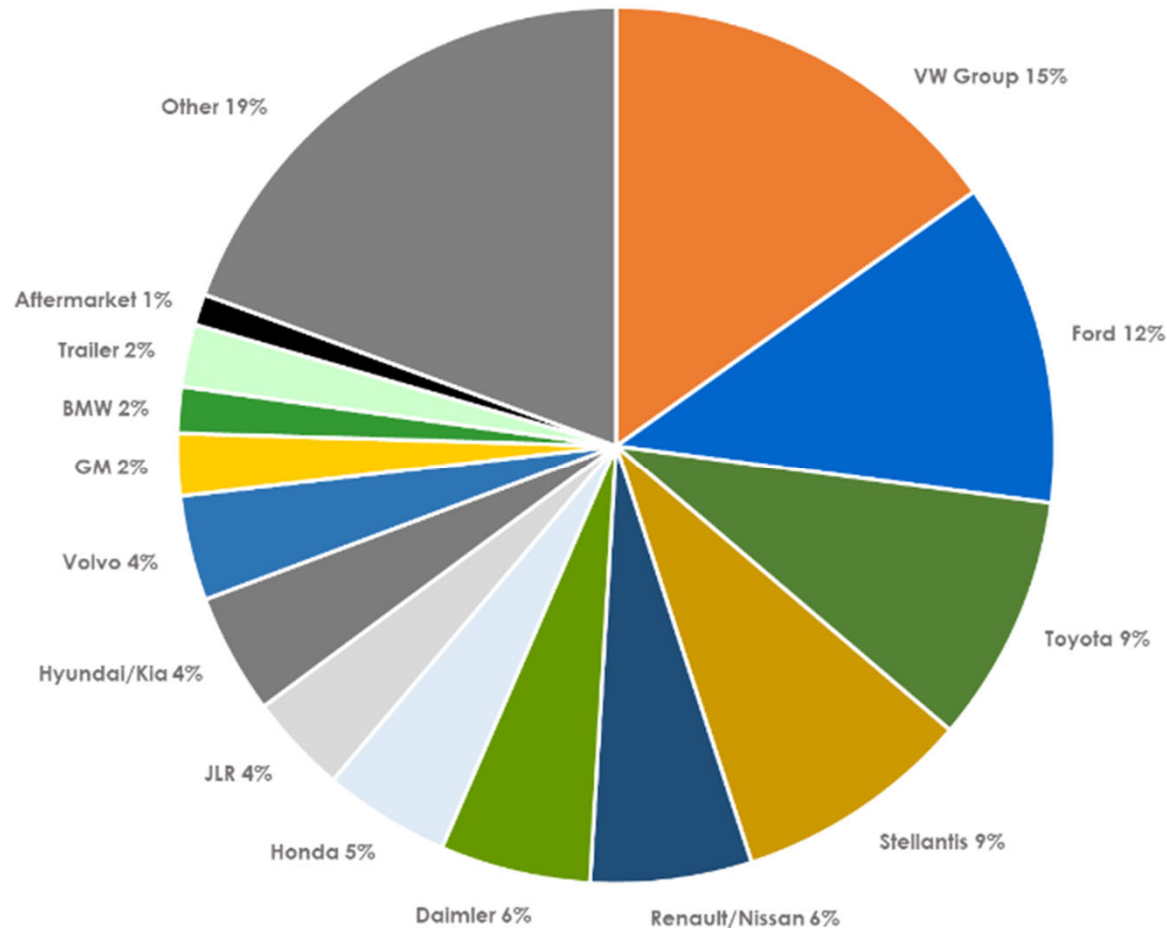
Light Vehicle Aluminum	●
Light Vehicle Steel	●
Commercial Vehicle Steel	●
Off Road / Agriculture Steel	●
Adm. / Sales / Engineering	●



A global network of strategically-located sites keep us close to customers and suppliers



2021 Sales by Customer (% of Revenue)



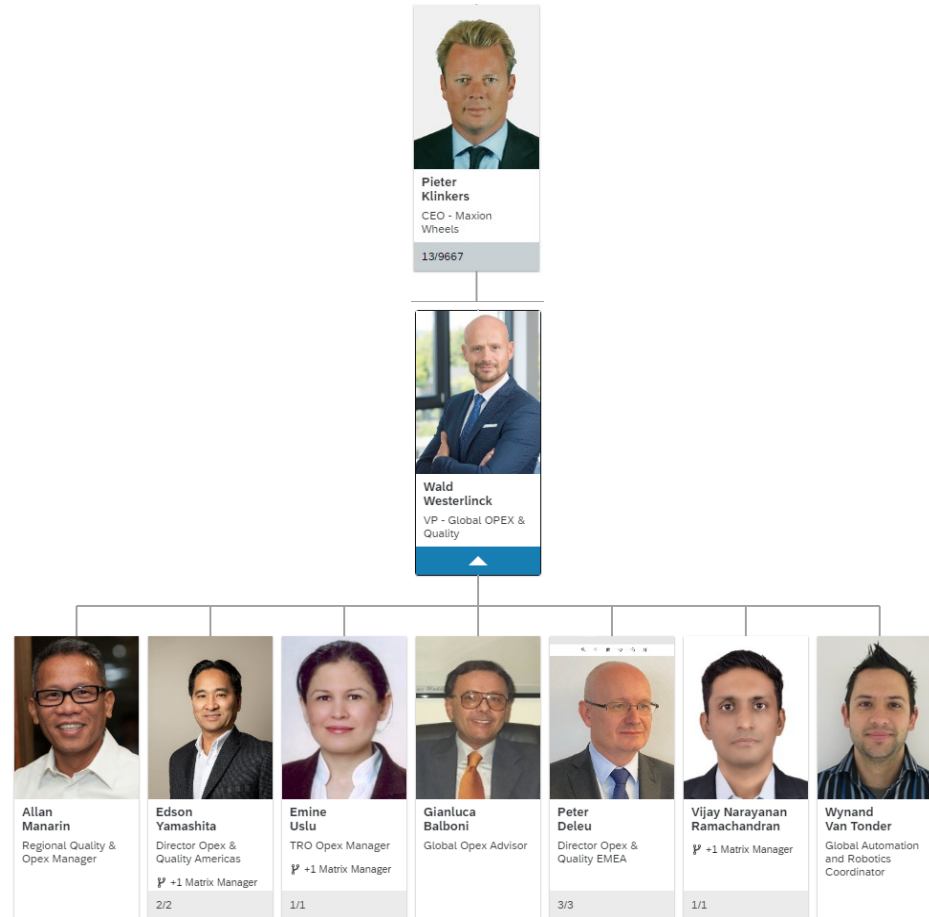
Also serving as market leader of smart wheel solutions for electric vehicles and trucks.

A globally diverse customer portfolio provides stability and generates know-how

Operational Excellence

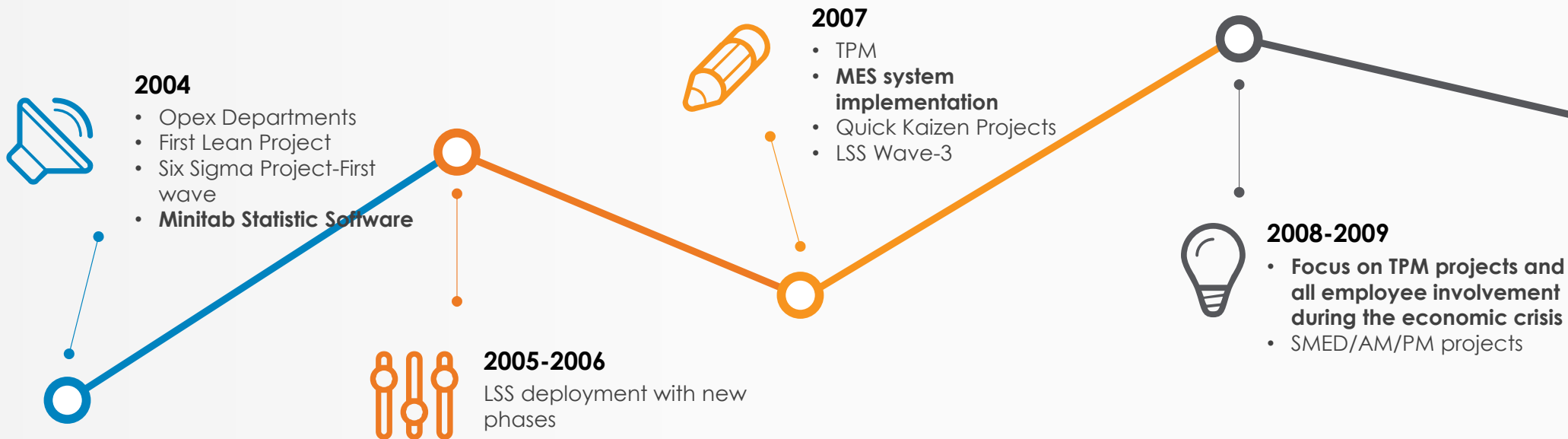


Opex Organizational Structure



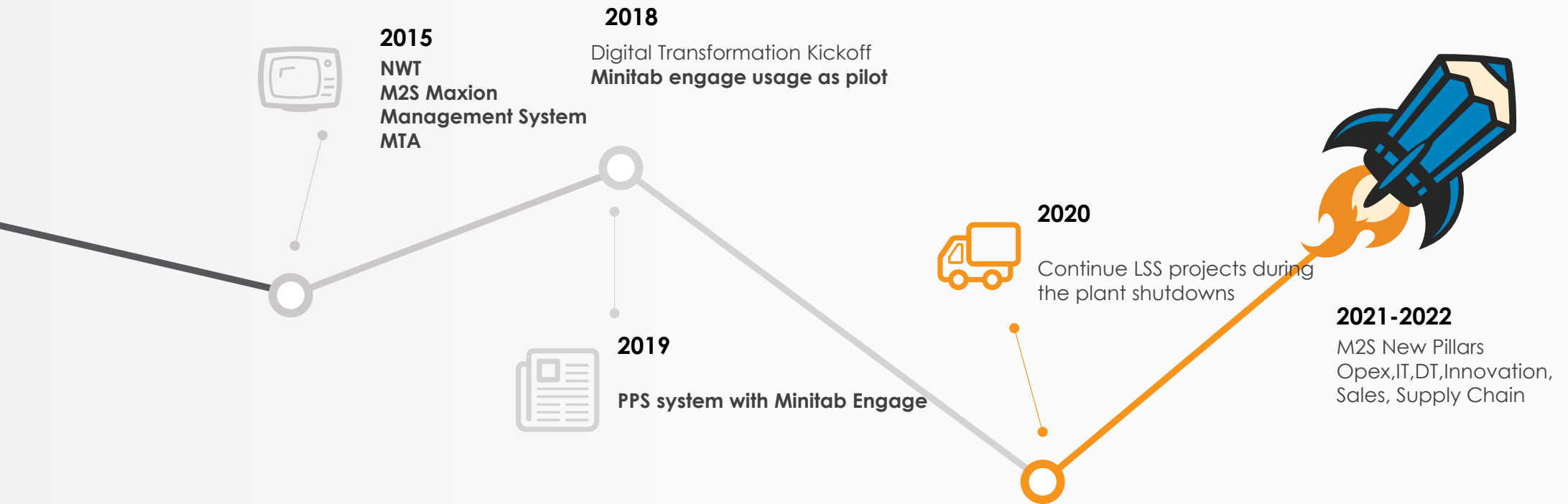
CEO → VP → BU Directors → Regional Managers → Plant Opex Managers

Milestones of Opex Journey





Milestones of Opex Journey



Maxion Wheels has almost 20 years of experience deploying OPEX, and it has become part of the culture of the company

Global Opex and Quality Digital Framework





Improvement opportunities

Before

Standardization

Transparency, visibility, sharing

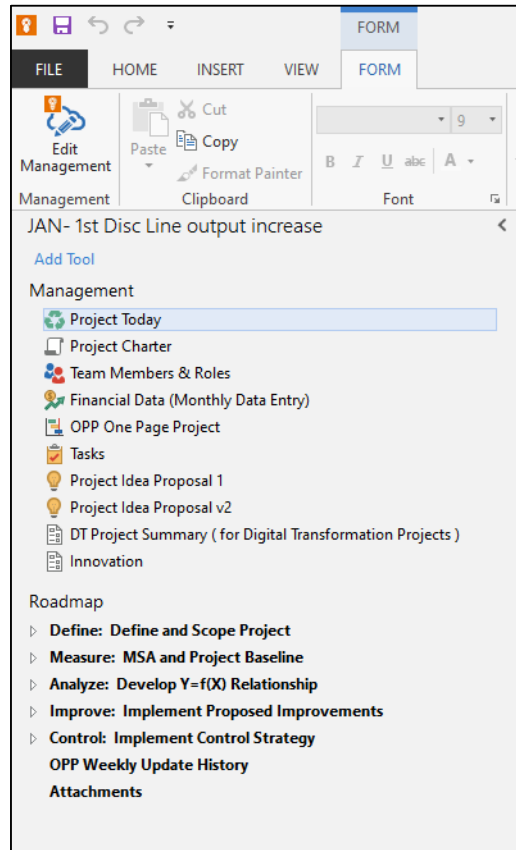
Avoiding spreadsheets

Automation, digitization

Reporting to Management

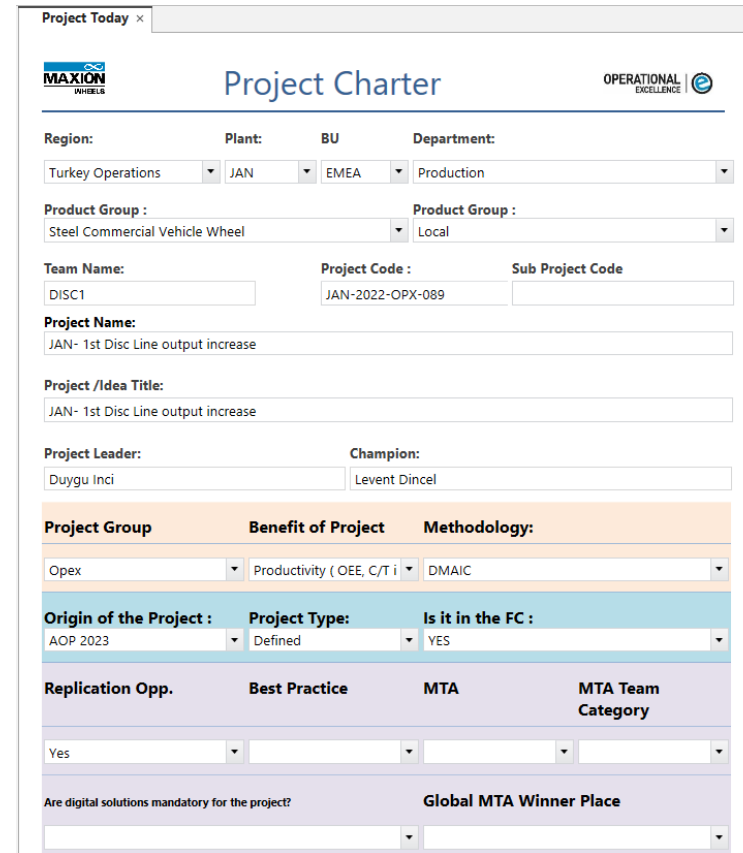
After

Project Management Standardization



The screenshot shows the MAXION WHEELS Project Management interface. The top navigation bar includes 'FILE', 'HOME', 'INSERT', 'VIEW', and 'FORM'. The 'FORM' tab is active. The sidebar menu is expanded, showing the following items:

- Management
 - Project Today
 - Project Charter
 - Team Members & Roles
 - Financial Data (Monthly Data Entry)
 - OPP One Page Project
 - Tasks
 - Project Idea Proposal 1
 - Project Idea Proposal v2
 - DT Project Summary (for Digital Transformation Projects)
 - Innovation
- Roadmap
 - Define: Define and Scope Project
 - Measure: MSA and Project Baseline
 - Analyze: Develop Y=f(X) Relationship
 - Improve: Implement Proposed Improvements
 - Control: Implement Control Strategy
 - OPP Weekly Update History
 - Attachments



The screenshot shows the MAXION WHEELS Project Charter form. The form is titled 'Project Charter' and includes the following sections:

- Region:** Turkey Operations
- Plant:** JAN
- BU:** EMEA
- Department:** Production
- Product Group:** Steel Commercial Vehicle Wheel
- Product Group:** Local
- Team Name:** DISC1
- Project Code:** JAN-2022-OPX-089
- Sub Project Code:**
- Project Name:** JAN- 1st Disc Line output increase
- Project /Idea Title:** JAN- 1st Disc Line output increase
- Project Leader:** Duygu Inci
- Champion:** Levent Dincel
- Project Group:** Opex
- Benefit of Project:** Productivity (OEE, C/T i
- Methodology:** DMAIC
- Origin of the Project:** AOP 2023
- Project Type:** Defined
- Is it in the FC:** YES
- Replication Opp.:** Yes
- Best Practice:**
- MTA:**
- MTA Team Category:**
- Are digital solutions mandatory for the project?:**
- Global MTA Winner Place:**

Easy to customize existing default management templates , easy to add new ones

Easy to add project related any documents
People can easily open these documents

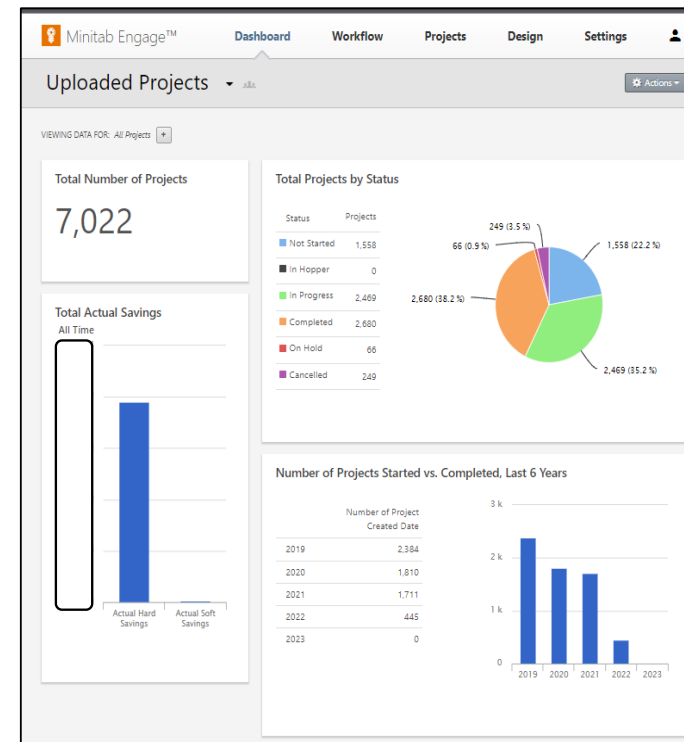
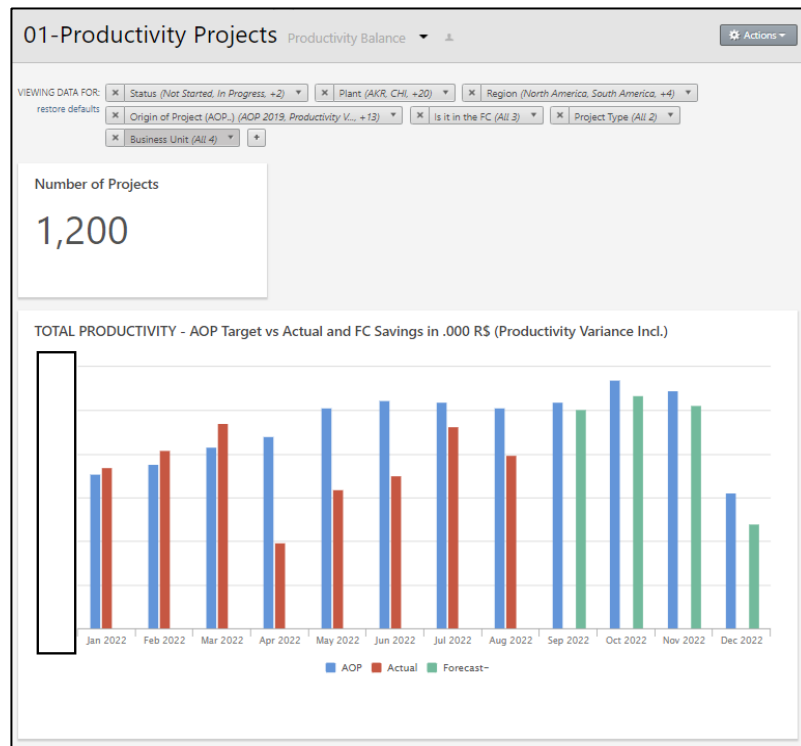
Project roadmap and tool templates

- Compliance with standards (Lean six Sigma, PDCA, 5S, 8D, Kaizen, etc.) KPIs





Reporting-Visibility: Dashboards with key metrics for projects run across multiple sites and business units





Sharing: Easy to make benchmarking from dashboards

Minitab Engage™ Dashboard Workflow Projects Design Settings

01-Productivity Projects

Productivity Balance

VIEWING DATA FOR: Status (Not Started, In Progress, +2) Plant (AKR, CHI, +20) Region (North America, South America, +4) Project Group (Capex, Opex, +11) Origin of Project (AOP,) (AOP 2019, Productivity V..., +13) Is it in the FC (All 3) Project Type (All 2) Business Unit (All 4) MTA (All 8)

Number of Projects

1,199

TOTAL PRODUCTIVITY - AOP Target vs Actual and FC Savings in .000 R\$

Best Practice Projects

Projects Showing results for "butt welding"

COLUMN SETS Projects at a Glance

Search: "butt welding"

Project Name	Team Name	Status	Health	Project Code	Origin of Project
2021-Butt welding rejection reduction on...	Challenger	Completed	Green	PNP-2021-OPX-024	AOP 2021
2021-Butt welding Line 1 - Swing arm cla...		Completed	Green	PNP-2021-OPX-015	AOP 2021
2022- Smart Butt welder Line 2	Smart Butt weld	In Progress	Yellow	PNT-2022-DT-001	AOP 2022
Butt welding Top & Bottom Jaw life impro...	Butt welding Top & Bott...	Completed	Green	12	AOP 2019
Chiller unit commonisation for Butt weldin...	Chiller unit commonisati...	Completed	Green	20	AOP 2019
Decrease of scraps caused of butt welding...	CRP34	Completed	Yellow	CRP34	AOP 2019
Decrease of scraps caused of butt welding...	Weldopt	Completed	Green	JAN-2020-OPX-004	
Hyd oil consumption improvement on Bu...	Hyd oil consumption im...	In Progress	Green	9	
INC-Decreasing butt welding crack ratio i...	BW	In Progress	Yellow	INC-2020-OPX-002	
INC-Forward Costing 2020-2024		In Progress	Yellow		

Total Rows: 21 Show on page

Share

- Info
- New
- Open
- Save
- Save As
- Print
- Share

Share

- Share
- Include in Dashboard
- Email Link to Project

Prioritisation-Structuration: Checklists or scoring

Assessment Date: Final maturity score

Insert Tool

Search: maturity

- All Tools
- Form
- Analysis Capture
- Process Map
- Value Stream Map
- Fishbone
- CT Tree
- Idea Map
- Mind Map
- Monte Carlo Simulation

MTA-Maturity Checklist-DT

MTA-Maturity Checklist-NWT Administrative

MTA-Maturity Checklist-NWT Production

MTA-Maturity Checklist-NWT Support

MTA-Maturity Checklist-Opex

OpEx Teams Maturity Checklist

Team Name: Assessment Date: Final Maturity Score: 0,00

Assessors Name: Department: Job Title:

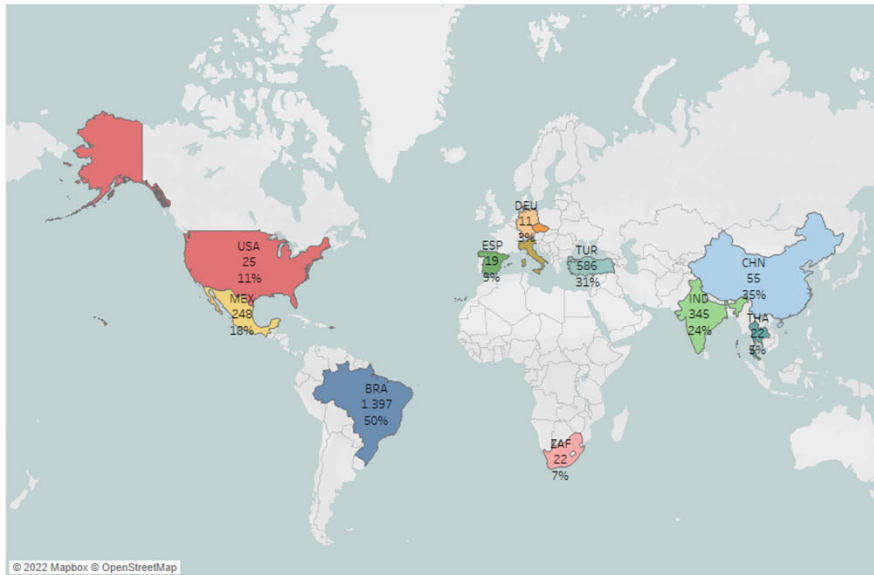
Topic	Requirement	Score	(10 - 9) Benchmarking Class	(8 - 7) Exceeds the Requirements	(6 - 5) Meets the requirements	(4 - 3) Partially meets the requirements	(2 - 0) No or Poor evidence
Targets	KPI's and Targets linked to AOP, Productivity, or plant strategy	0	10: KPI's are linked to AOP or plant strategy and targets are exceeding Plant's needs	8: KPI's are linked to AOP or plant strategy and targets are meeting Plant's needs	6: KPI's are linked to AOP or plant strategy, but targets were only defined based on team's decision and they are not meeting Plant's needs	4: Team prioritized their KPI's only based on their needs	0: Team has no evidence of targets definition
	Targets Validation		10: OpEx project Team Leader, Sponsor and OpEx have validated the project targets	8: OpEx project Team Leader and OpEx have validated the project targets	6: OpEx project Team Sponsor has validated the project targets	4: Team has defined targets, but there is no evidence of validation	0: Team has no evidence of targets definition
KPI Results	KPI 1:	0	10: KPI result has exceeded the baseline \geq 500% of achievement	8: KPI result has exceeded the target \geq 150% of achievement	6: KPI result has exceeded the target in \geq 110% of achievement	4: KPI result has achieved the target \geq 90% \leq 99% of achievement	2: KPI result has achieved the target \geq 70% \leq 79% of achievement
	KPI 2:	0	9: KPI result has exceeded the target \geq 200% of achievement	7: KPI result has exceeded the target \geq 120% of achievement	5: KPI result has exceeded or met target \geq 100% achievement		
	KPI 3:	0					
	KPI 4:	0					
	KPI 5:	0					
	Number of KPIs	1					
	Overall KPI Score	0,00					
After improvements, Improved KPI results should be monitored at least 5 months							
Savings	Cost Reduction Projects (CRP) - % Target Achievement validated by VPM	0	10: CRP result has exceeded the target \geq 150% of achievement	8: CRP result has exceeded the target \geq 130% of achievement	6: CRP result has exceeded the target \geq 110% of achievement	90% \leq 99% of achievement	70% \leq 79% of achievement
			9: CRP result has	7: CRP result has	5: CRP result has		

Topic	Achievable Maximum Point	Total Achieved Point	Maturity Score
Safety	30	30,00	100,00
Targets	30	30,00	100,00
KPI Results	50	45,00	90,00
Savings	20	20,00	100,00
Opex Methodologies	10	10,00	100,00
Quality of Improvements	20	18,00	90,00
Improvements Standardization	30	30,00	100,00
Best Practices Implemented	20	16,00	80,00
Innovation and Digital Transformation	10	8,00	80,00
Team Management	30	30,00	100,00
Total	250	237,00	94,80

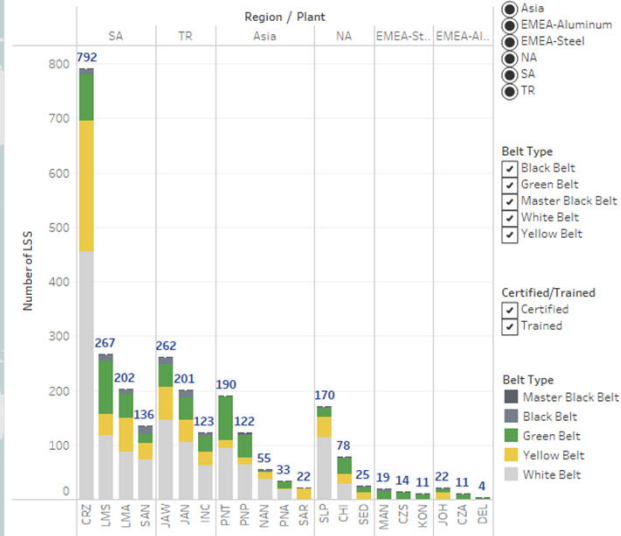
Easy to add new forms like checklists, scorecards



Lean Six Sigma Deployment



Number of Lean Six Sigma Certified / Trained people



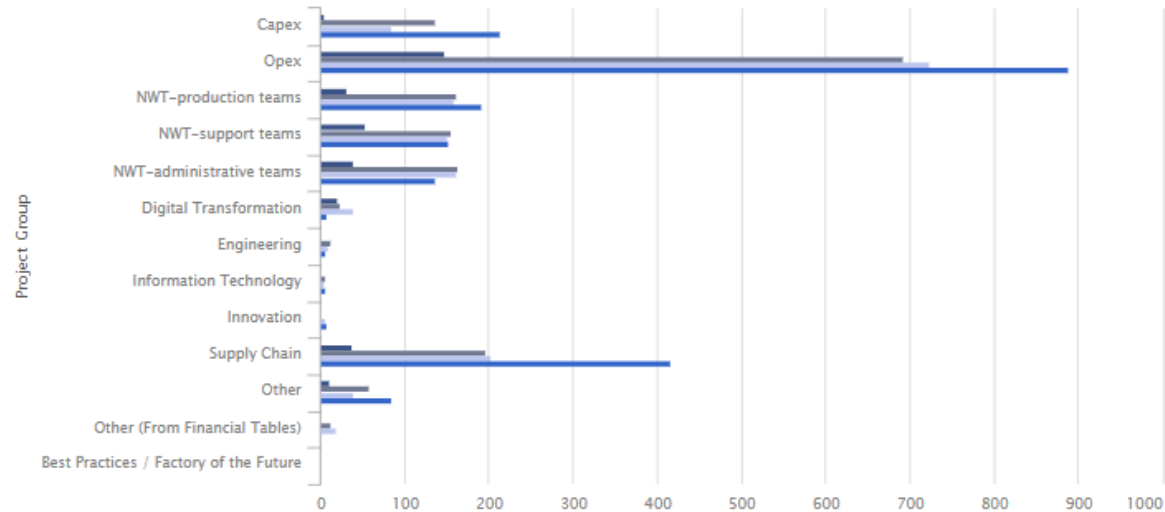
Belt Type

Master Black Belt	9
Black Belt	99
Green Belt	598
Yellow Belt	514
White Belt	1.340
Grand Total	2.560

1480 Minitab Engage Users , 237 of them have administrator role

Number of Projects - (Created Date)

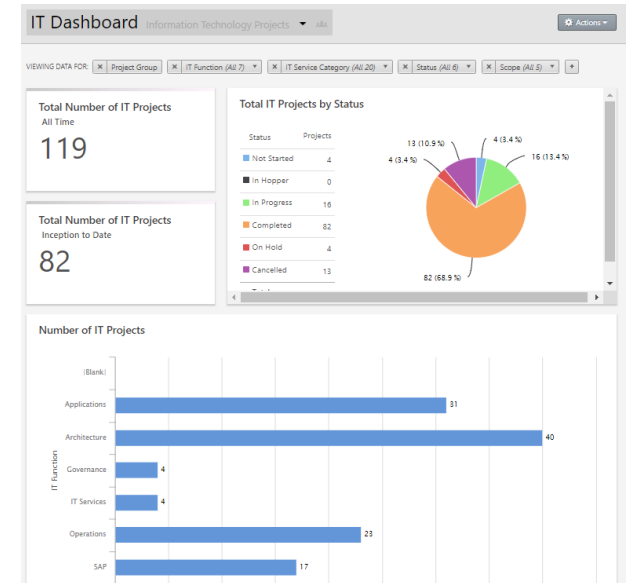
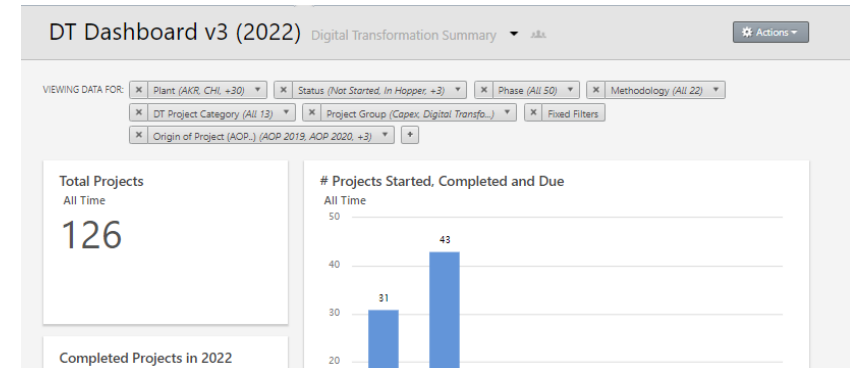
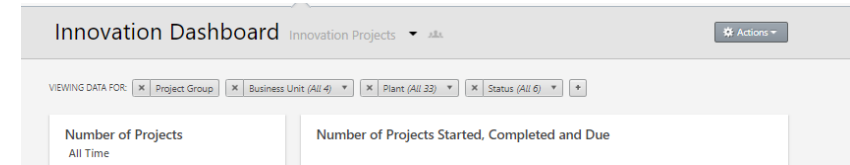
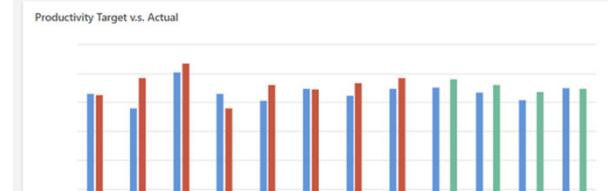
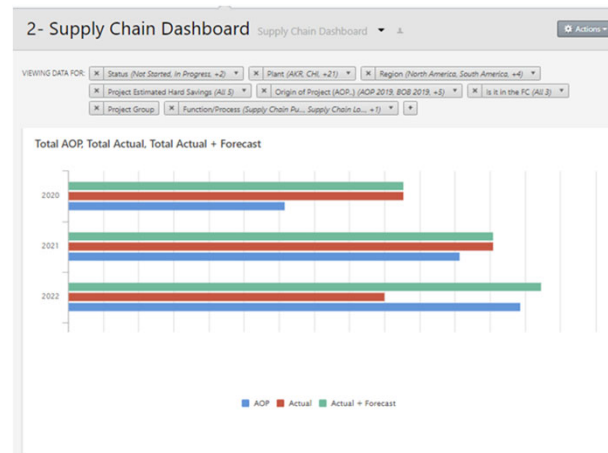
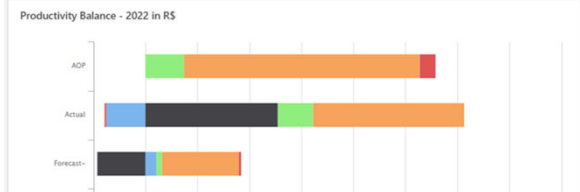
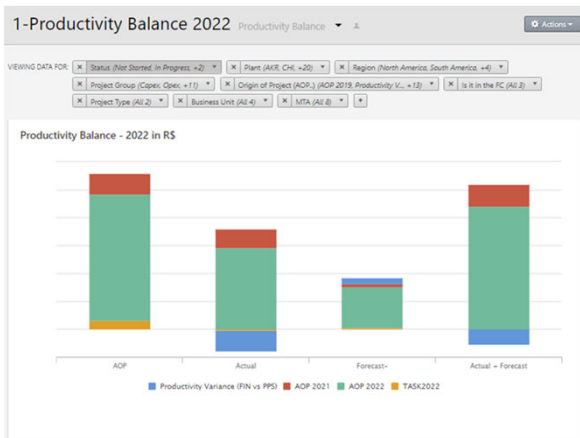
Project Group	2019	2020	2021	2022	Total
Capex	213	85	137	5	440
Opex	888	724	693	147	2,452
NWT-production teams	191	158	162	32	543
NWT-support teams	153	151	156	54	514
NWT-administrative tea...	136	162	164	40	502
Digital Transformation	8	39	23	21	91
Engineering	7	10	13	0	30
Information Technology	6	4	6	0	16
Innovation	8	6	1	0	15
Supply Chain	416	202	197	37	852
Other	84	40	58	11	193
Other (From Financial Ta...	0	19	12	1	32
Best Practices / Factory ...	0	2	1	0	3
Total	2,110	1,602	1,623	348	5,683



The number of projects increases in the Annual Operational Planning period



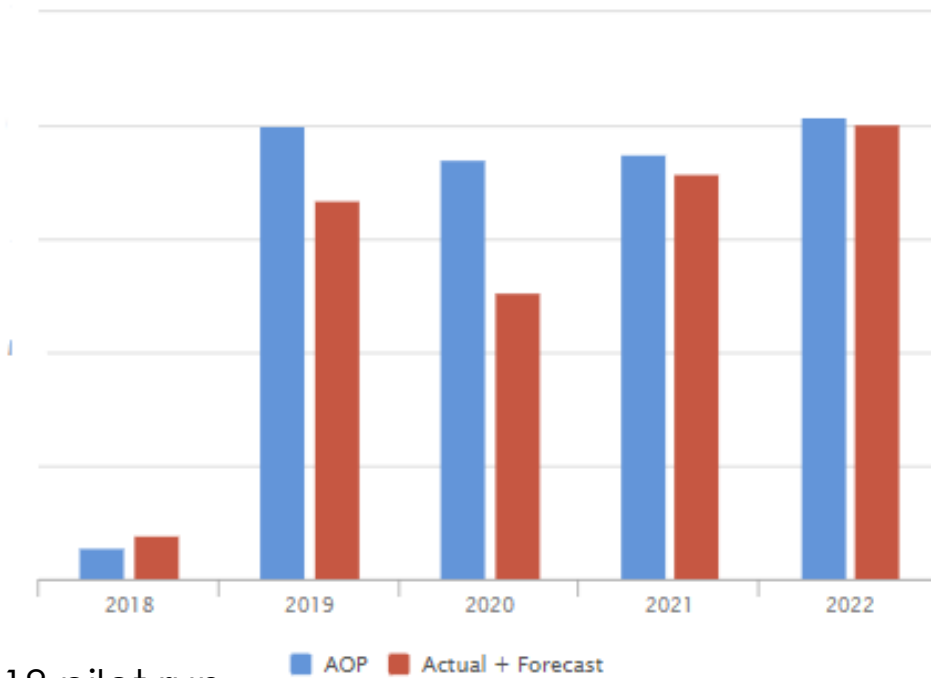
Functional Deployment





Opex Projects Yearly Productivity Trend

TOTAL PRODUCTIVITY - AOP Target vs Actual Savings



*2018 pilot run

Maxion Management System – Opex Pillar



Standart Name	Element
1 - Data Analytics	01 - Virtual Plant Model (VPM)
	02 - VPM Statistics
	03 - MES
	04 - IMPACT portal
	05 - Data Analytics
2 - Project Planning and Management	01 - Vision and Mission
	02 - Strategic Planning and AOP OPEX/CAPEX projects determination Process
	03 - Project Portfolio System (PPS)
3 - Continuous Improvement Culture	01 - Opex Team Structure and Development of OPEX team
	02 - Continuous Improvement Structure and Knowledge Exchange
	03 - Natural Work Teams
	04 - 5S and Workplace Organization
4 - MX Business Performance	01 - Policy Deployment (PD)
	02 - OEE
	03 - Benchmarking
	04 - Business performance and reporting
5 - MX Global Standardization	01 - Maxion Management System (M2S)
	02 - iMax portal
	03 - WOW (Way of Working)
6 - MX Recognition Culture	01 - Maxion Team Award (MTA)
	02 - Recognition System & Performance Management

Maxion Management System Opex Pillar and DT, Innovation Pillars requirements show Project Portfolio System as a standard of company



Recognition



- Opex Teams
- Natural Work Teams – Production
- Natural Work Teams - Administrative
- Natural Work Teams - Support
- Innovation
- Policy Deployment (Plants)

LOCAL MTA

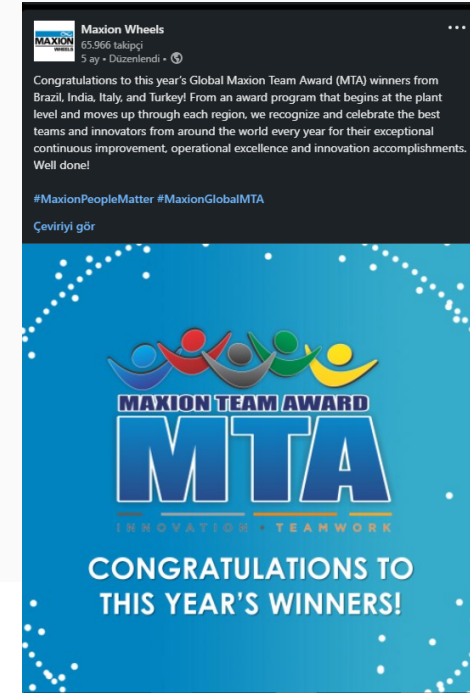
- January
- 23 plants

REGIONAL MTA

- February
- 5 region

GLOBAL MTA

- March





MAXION
WHEELS MATTER
