



## How to effectively drive the end-to-end digitalization of the experience of your customers and dealers

Marco Piovano, Director Dealer Digital Solutions at Terex Materials Processing





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# Terex Business Structure



We are a global corporation organized in 2 segments

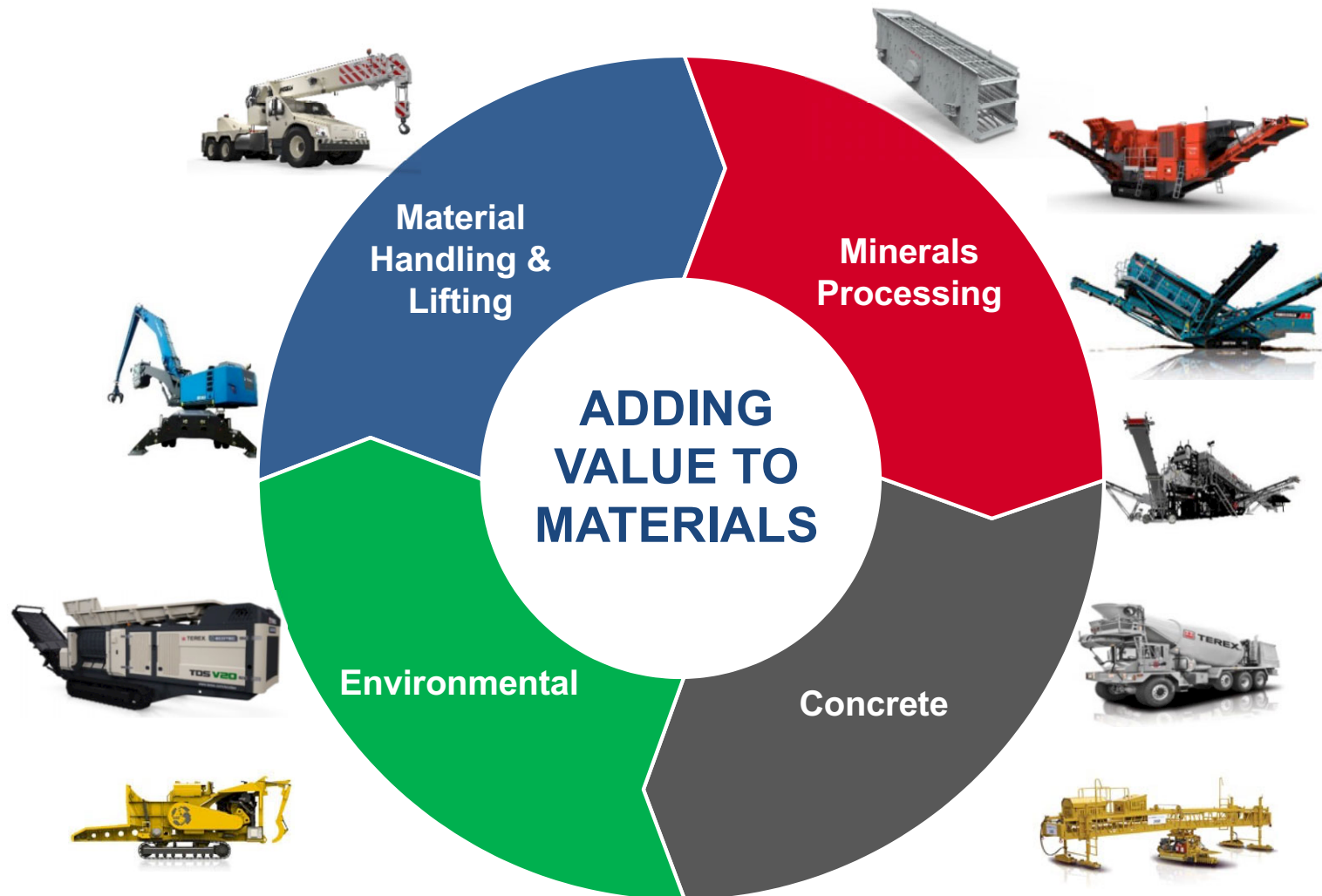




# Terex Business Structure



Our portfolio of business lines add value to materials predominantly through four categories: Crushing and Screening, Environmental, Material and Scrap Handling, and Concrete.

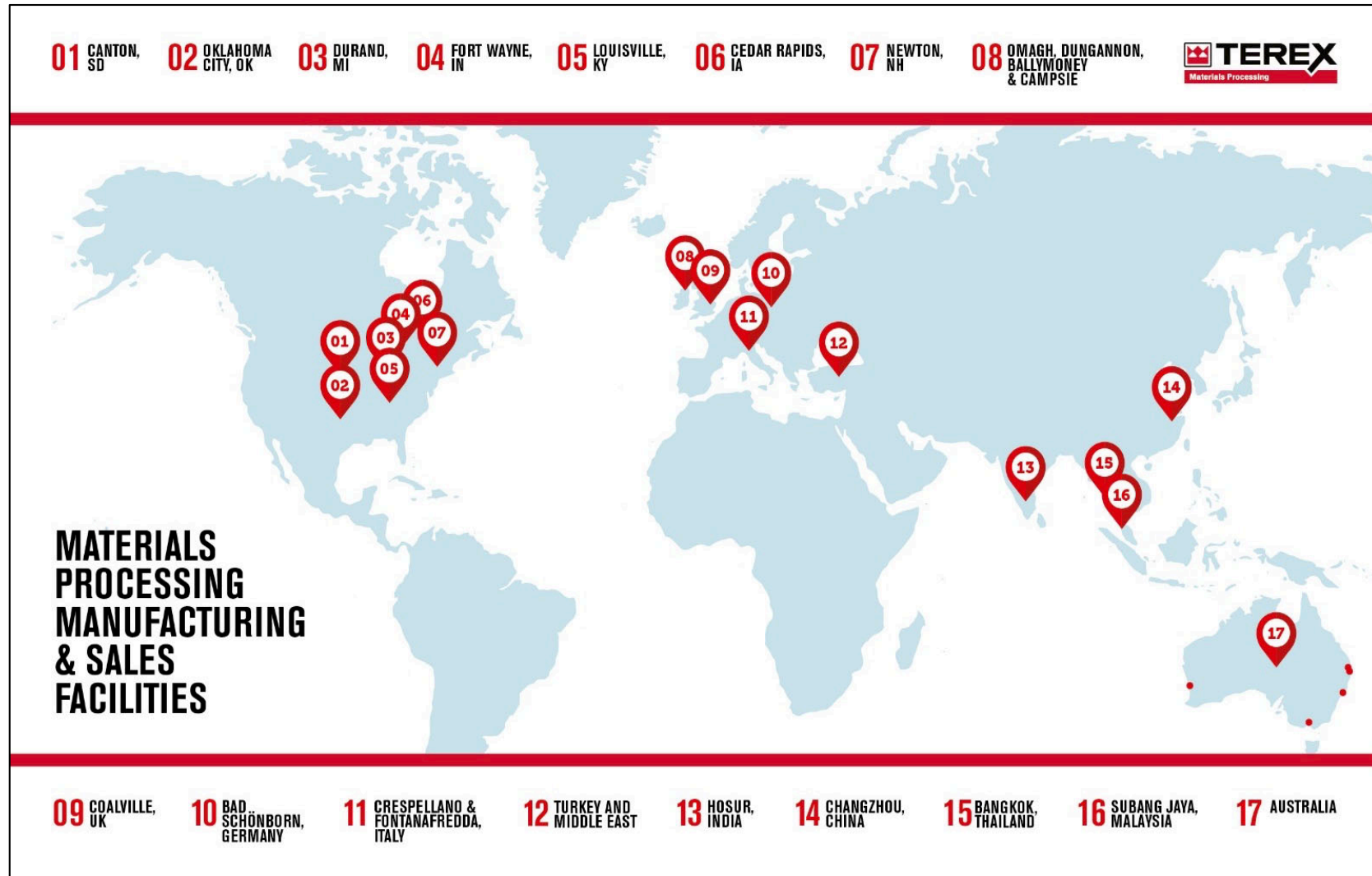




# Terex MP - Global Footprint



We have a true global presence—operating worldwide in over 80 countries, with more than 16 manufacturing and sales locations spread throughout North America, Europe, Asia and Australia.

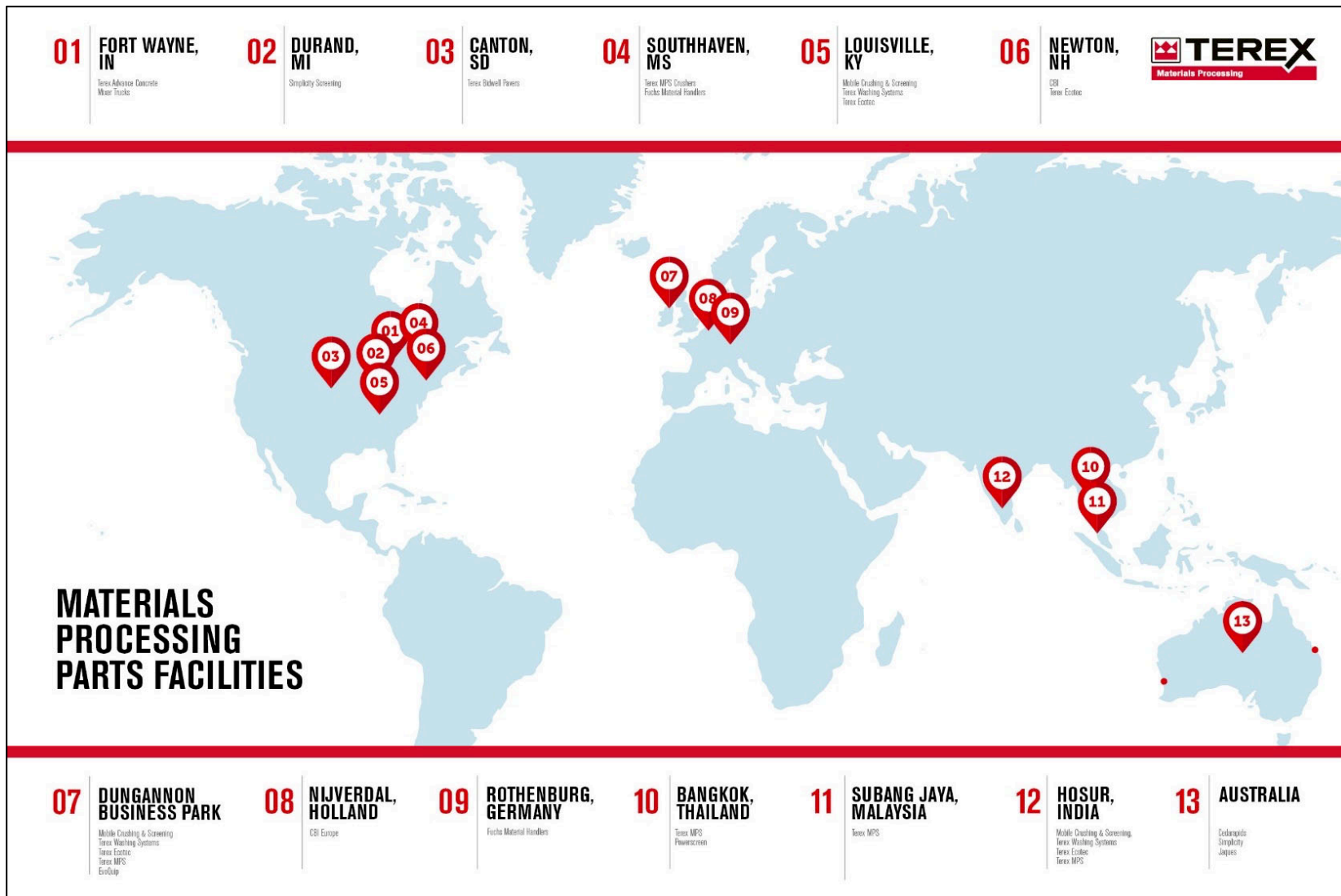




# Terex MP - Global Footprint



We also have an extensive global parts network to support our Aftermarket Service.

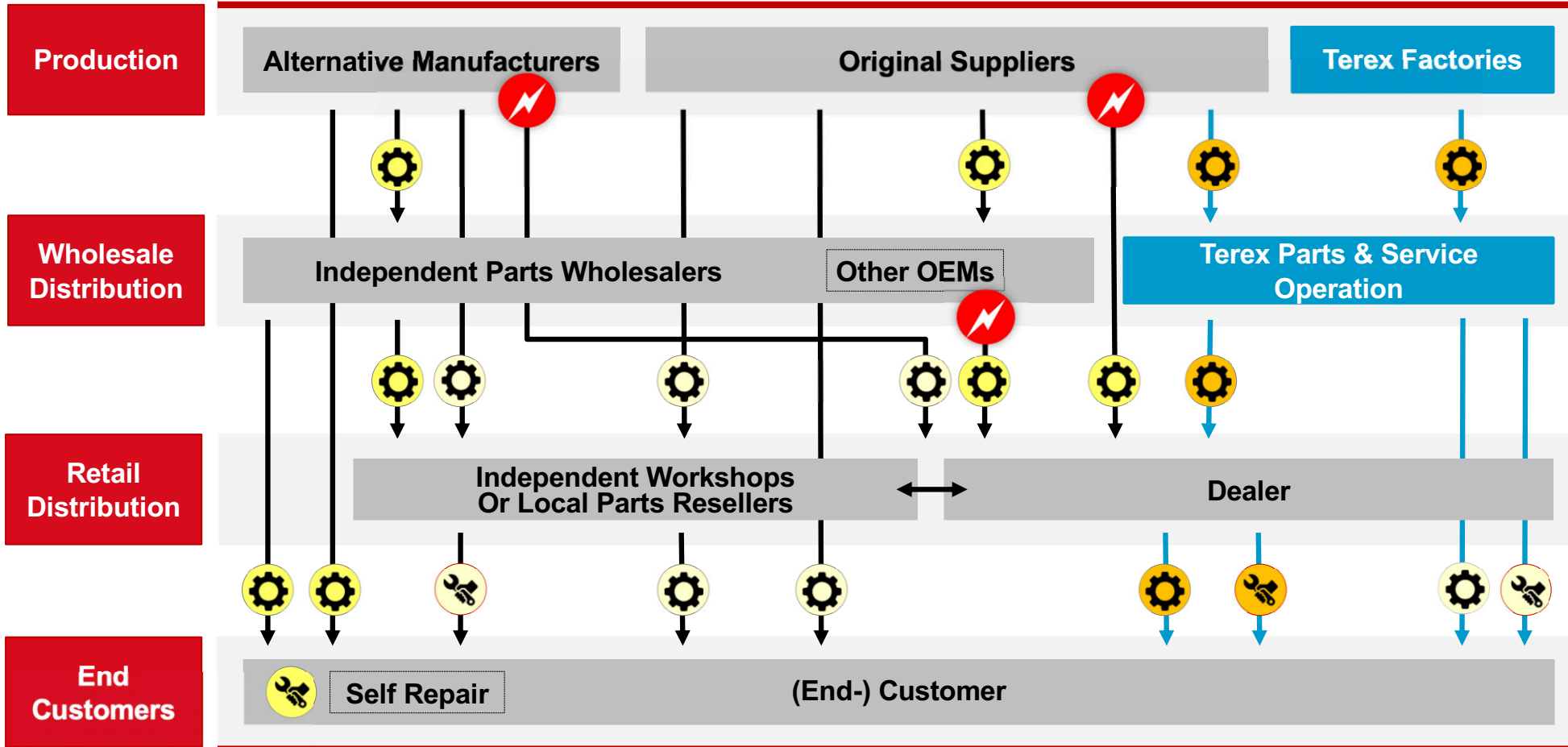




# MP is largely based on a dealer distribution model



Our equipment is serviced and repaired by a growing variety of Competing Distribution Channels and a highly fragmented Service Footprint demanding Terex to react



Threats

Terex  
Channels

Parallel  
Channels



Parts



Service

0% - 10%

10% - 25%

25% - 50%

Stream Market Value—

50% - 75%

75% - 100%

\*Machine aging is less than 5 year



# Customer digital evolution

The profile of our End-Customers evolved significantly in the last years, Terex & dealers must adapt to these changes to stay competitive and gain business opportunities



From **Machine** focus...

To **Aftersales** focus...

To **Digital** focus...





# Digitized Products & Services

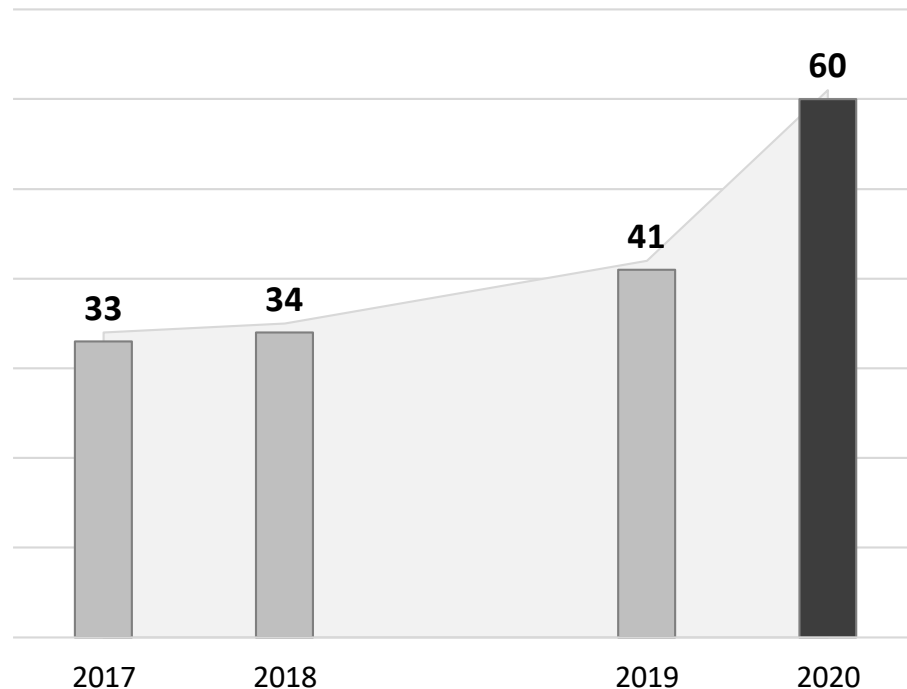


Materials Processing

Digitized Products & Services have accelerated by several years during the Covid-19 pandemic; however, the construction industry is among the least digitized

Average share of products and/or services that are partially or fully digitized, %\*

■ Pre-Crisis ■ Covid-19 Crisis



Industry digitization index\*\*



\*McKinsey & Company survey, 899 respondents C-Level Executives and Senior Managers representing a full range of regions, industries, company sizes and functional roles. <sup>1</sup>Years ahead of the average rate of adoption 2017-2019; \*\*McKinsey Global Institute. <sup>1</sup>Based on a set of metrics to assess digitization of assets (8 metrics), usage (11 metrics), and labor (8 metrics). <sup>2</sup>Information and communications technology. Source: AppBrain; Bluewolf; Computer Economics; eMarketer; Gartner; IDC Research; LiveChat; US Bureau of Economic Analysis; US Bureau of Labor Statistics; US Census Bureau; McKinsey Global Institute analysis



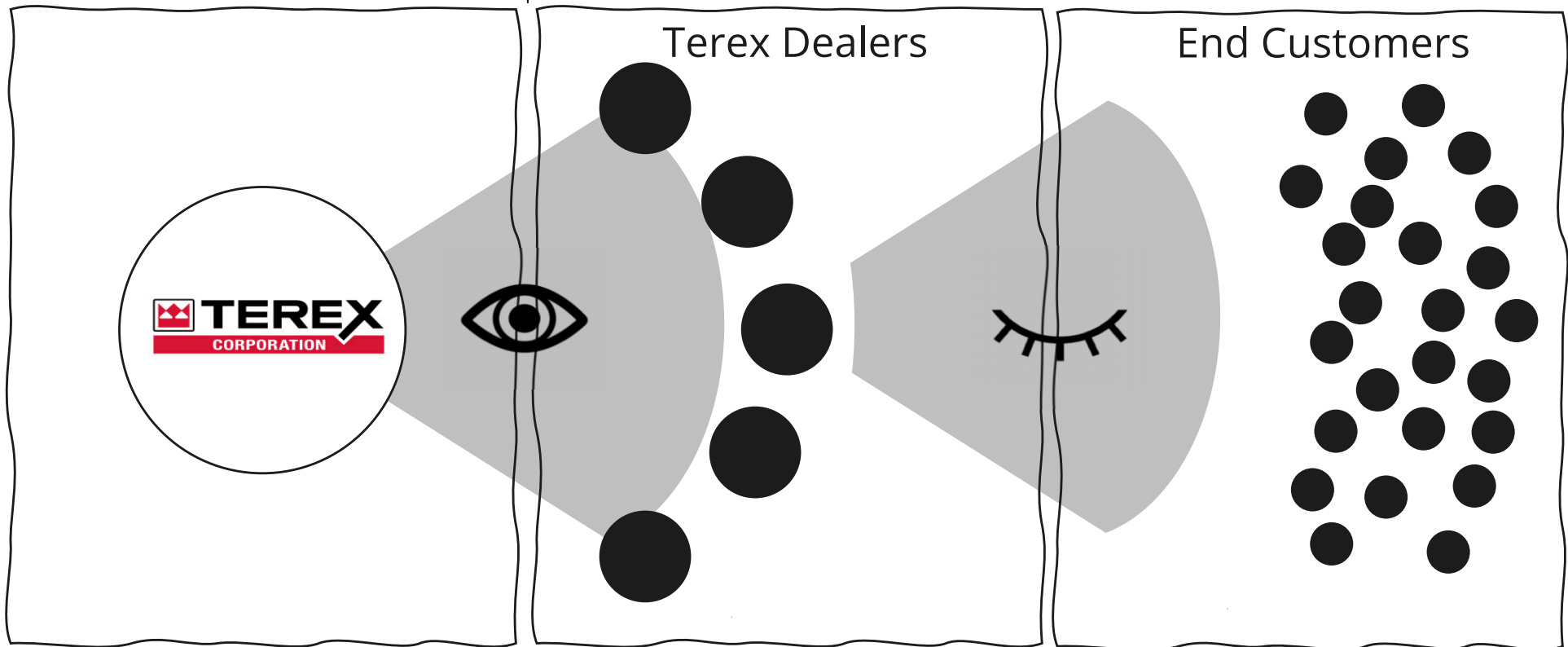
# Dealers are main drivers of customer experience



Our **end-customer experience** relies mostly on the **experience they have with our dealers**

While we improve the quality of our products and our services to dealers...

...we have very limited visibility & control over the end-customer experience. And the level of digitization of our dealers is very low



**Support our dealers to accelerate their digital transformation is the only way to drive a significant improvement in customer experience and stay ahead of competition**



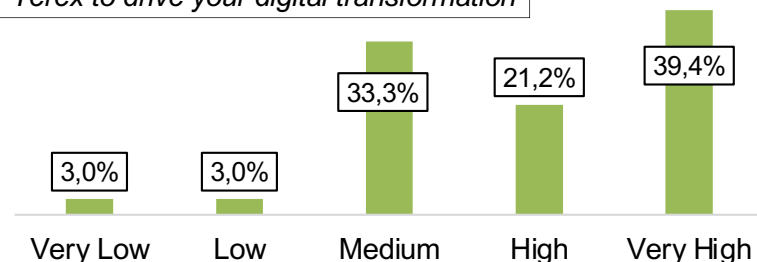
# Key Insights from Dealer Survey



We have conducted a **Digital Survey** across Terex MP dealers. Dealers are interested in collaborating with Terex on Digital and eCommerce is one of the top priorities followed by Service Mgmt. tools

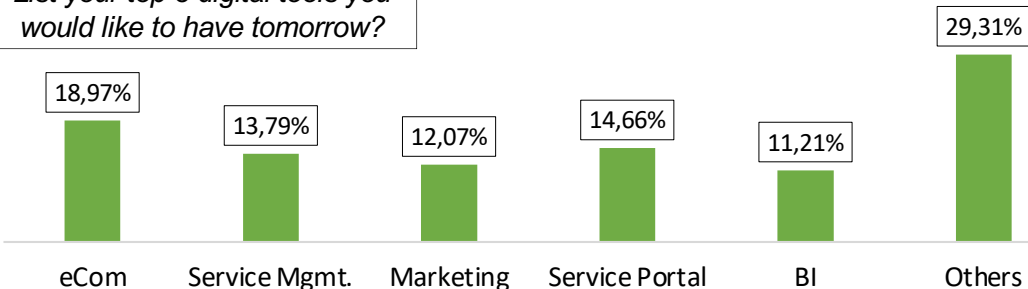
## Most dealers are interested to work with us (61%)

How interested are you to work with Terex to drive your digital transformation



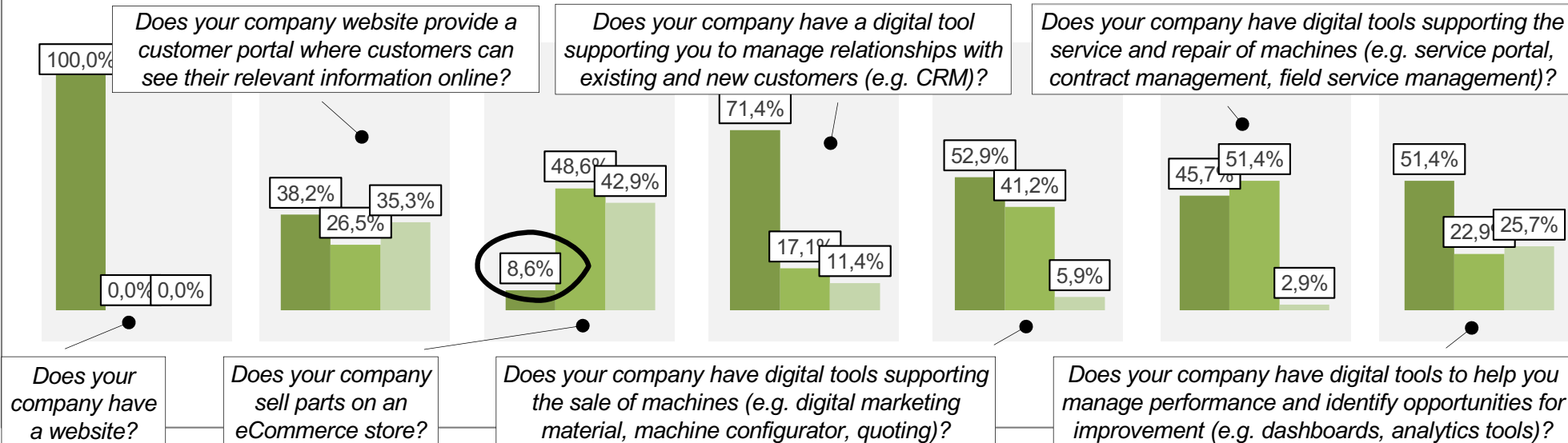
## eCommerce & Service Mgmt. solutions are priorities for dealers

List your top 3 digital tools you would like to have tomorrow?



## More than 91% of dealers currently don't have eCommerce

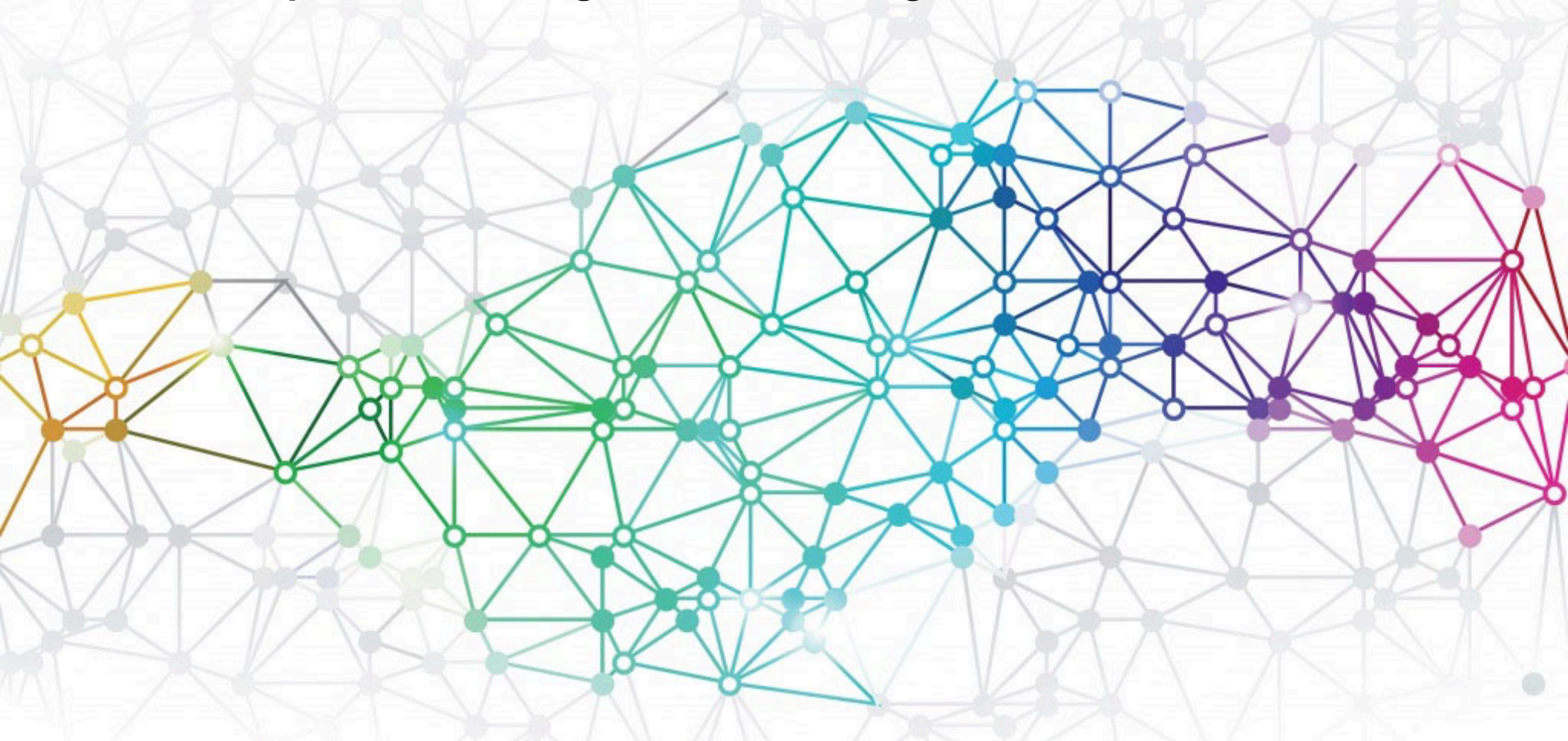
■ Have ■ Plan to have ■ Not in current plans





# Our Digital Transformation

**“Purposefully implement and use digital technologies by Terex and its distribution partners to improve business processes, productivity, deliver better customer experience, manage business risk, grow revenue and control costs.”**





# Value of digital solutions

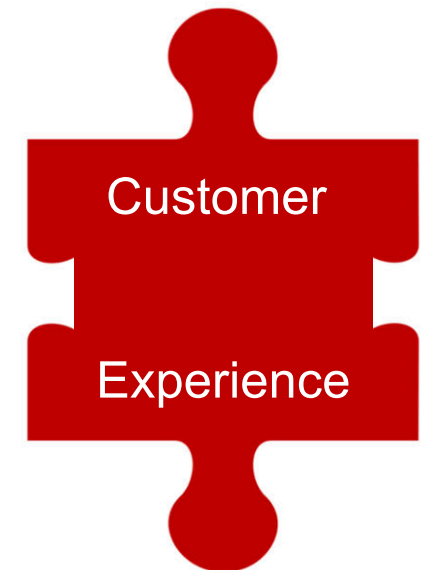
**A digital solution should focus on solving real problems and delivering real business value across 3 very inter-connected areas**



- Identify customer opportunities based on real data & analytics
- Leverage IoT / Big Data (e.g. from Telematics) to expand service offering



- Save Cost & Time via digital, automated, integrated processes
- Centralize data for internal & external users to consume more efficiently



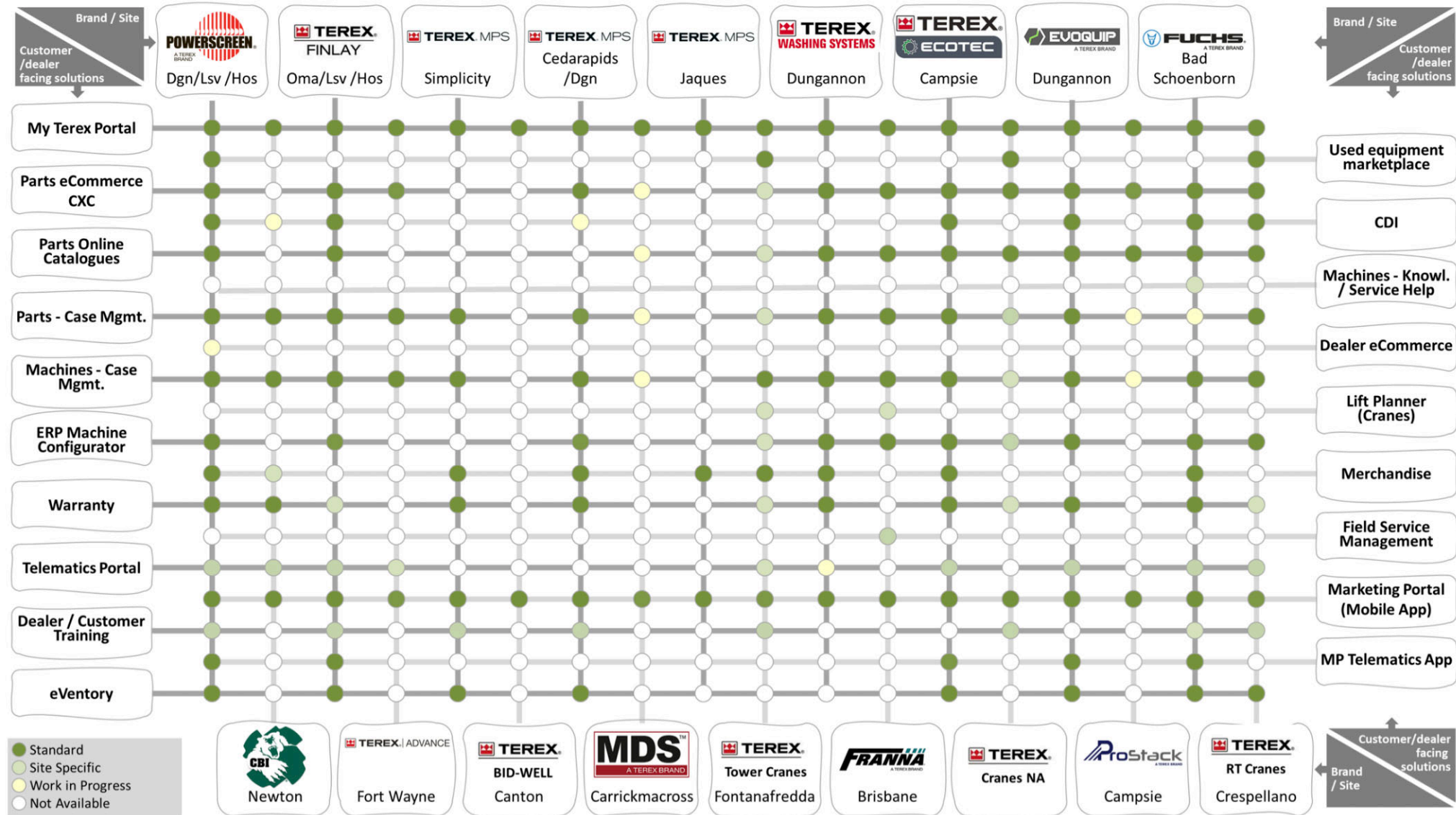
- Drive Customer Convenience: "Easy to do business with"
- Leverage technology to manage more professionally all customer interactions



# MP Digital Solutions Landscape



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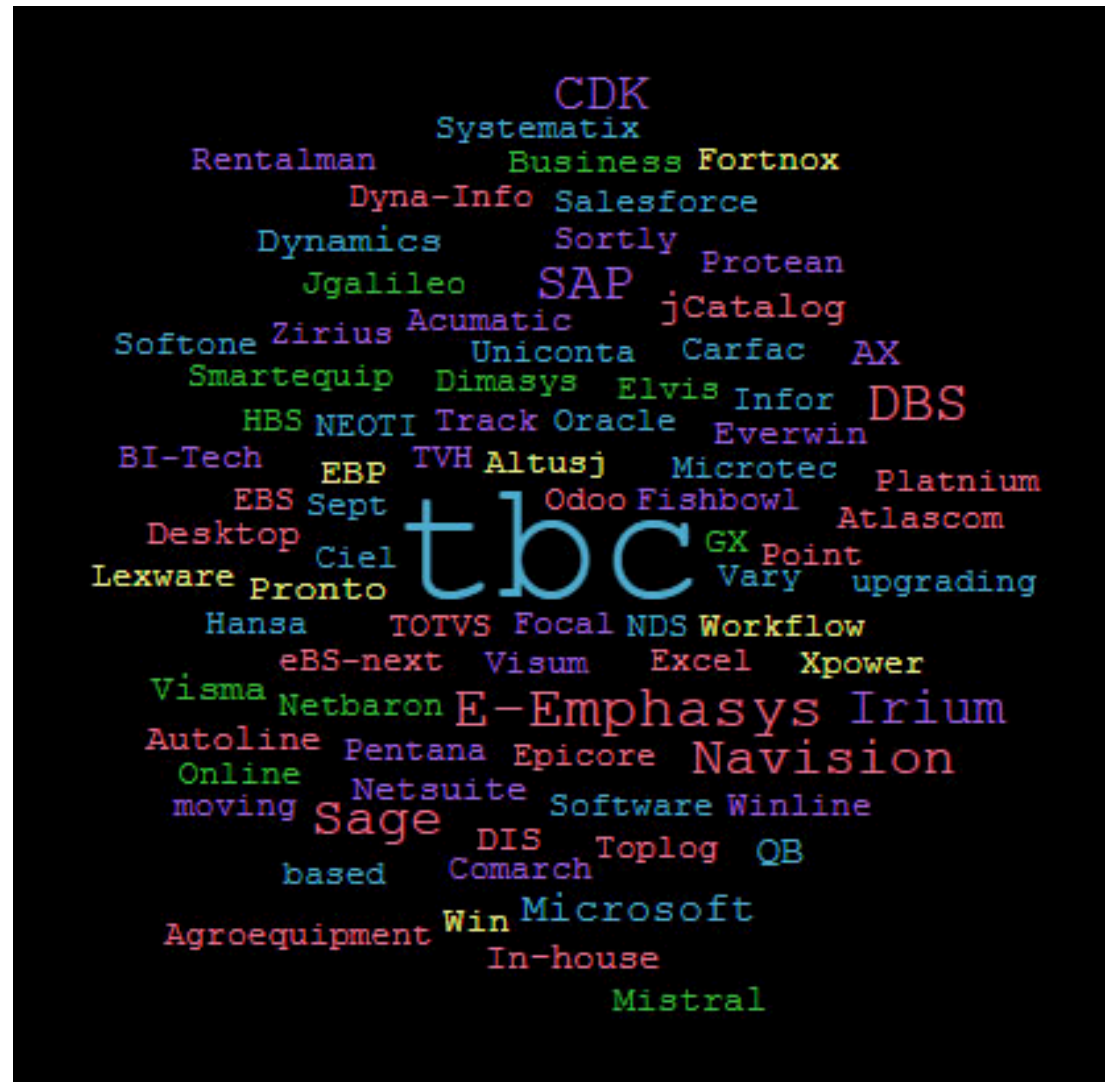


## DMS - Dealer Management Systems

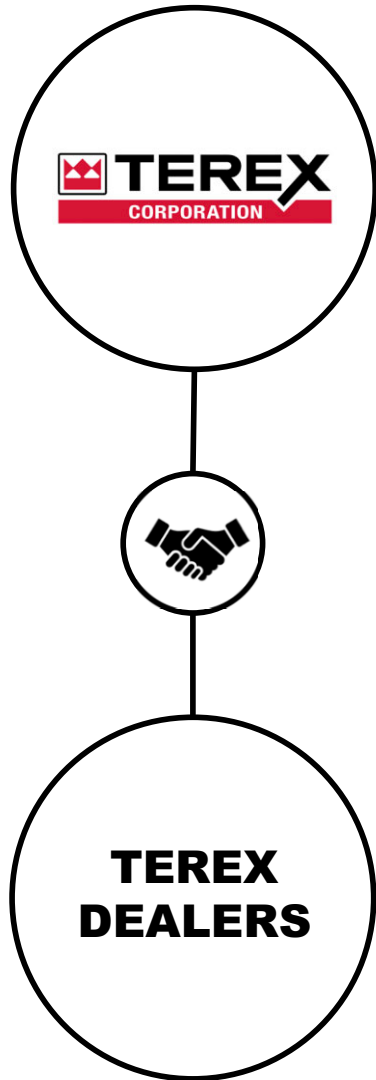
Across all our dealers we have identified so far 90 different Dealer Management Systems. This implies a very high level of complexity and effort of integration of systems & processes

We play more and more an active role in helping dealers to decide which system to adopt to:

- Make sure dealers have a good system...
- ...that can be integrated with Terex
- ...that has already some of critical digital applications (e.g. CRM)
- ...that allow us to limit integration effort







## Dealers and Terex join forces to:

- Be significantly more time & cost efficient to access State-of-the-Art Digital Solutions
- Leverage a broader team of experts covering all IT & business aspects on both Product and Customers angles
- Streamline integrated business processes and base them on a more powerful and accurate set of data

## With the clear objective to:

- Deliver Best-in-Class Customer experience, minimizing Machine Down Time and the Total Cost of Ownership
- Outpace and stay ahead of competitors (existing & new)
- Stay ahead of, or at pace with, changing customer needs
- Reach new markets and grow revenue
- Improve business efficiency, eliminate errors & delays and reduce costs



## Role of Dealers

Dealers  
develop  
capabilities  
on their own

- Define their digital roadmap
- Select, implement and maintain their digital infrastructure

## Role of TEREX

- Provide dealer the necessary data through automatic integration
- Provide guidance on digital solutions

Dealers join  
the TEREX  
Digital  
Solutions  
Program

- Actively define and prioritize Digital Solutions
- Engage and provide inputs to drive future development

- Support implementation and integration out of a TEREX Digital Solutions team
- Co-investment and negotiation with vendors, meaning much lower investment cost for each participating dealer



# Principles of Digital Solutions

## Extensibility



Solutions will **extend and adjust** towards future customer and dealer needs

## Scalability



Fully in the cloud, handling growing data needs and easily deployable enabling a **much lower cost from each dealer**

## Multi-Line



The digital solutions are **completely multi-line**, serving also Non-Terex products, to best support end-customer expectations

## Data Protection



The data is stored by an independent provider and **nobody except dealers can access their own data**

## Efficient Operations



Supported by **3<sup>rd</sup> party IT service provider** to avoid additional workload for dealer IT team

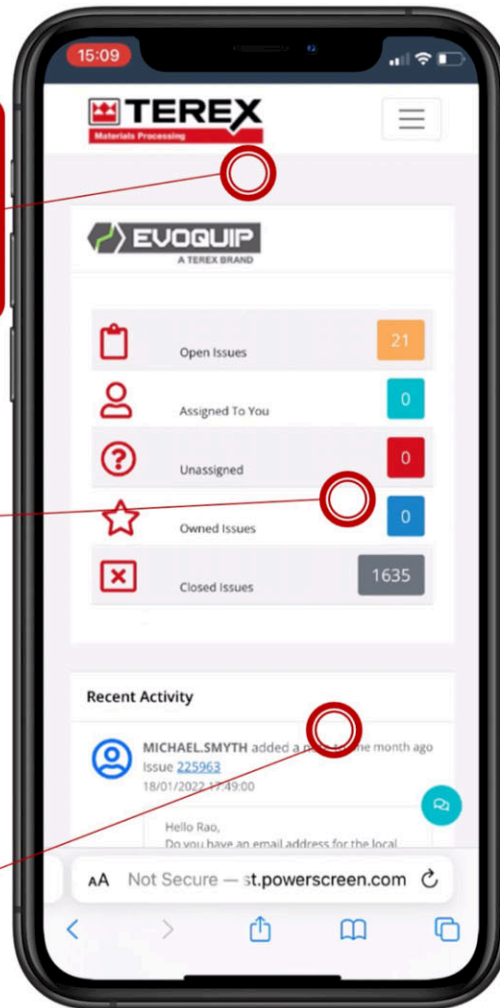
## Co-Investment



TEREX **co-invests** with dealers to accelerate their digital transformation and allow them accessing technology quickly and at a lower cost



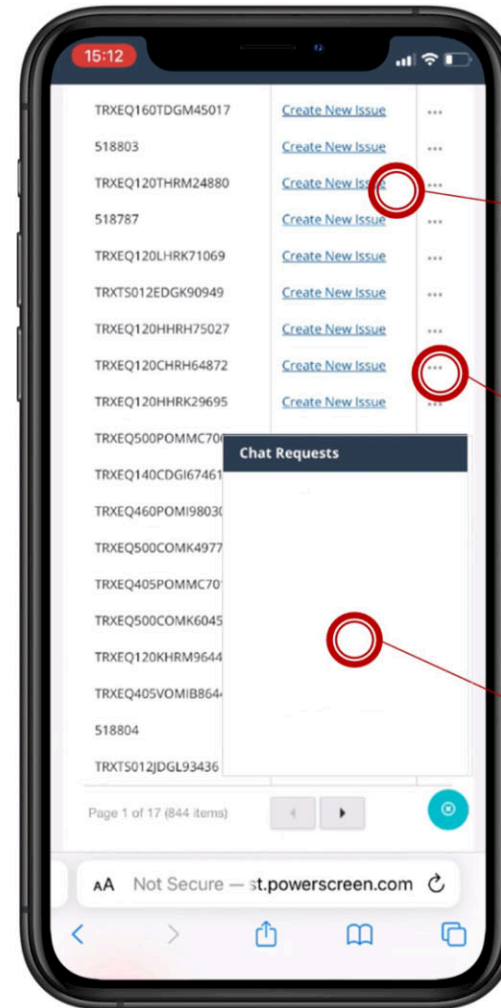
# Example: MP Help Desk



Optimized for mobile & refreshed User Interface

Dashboard with all issues by status

Easy to quickly access recent cases



Issues are easy to link to a specific machine S/N

New enhanced search functionality (knowledge base)

New Chat Box functionality



# Example: MP Telematics App



## Initial brands in scope



To manage fleet of machines, monitor their utilization and efficiency over time (Fuel Usage, Operating Hours and Idle time)

To receive and configure relevant service and event notifications for each machine

To access Terex advisories for a given issue helping identify the issue and the possible resolutions



To access quickly all details of machines on a list or an interactive map

To contact the dealer easily to sort out issues as well as sharing details of an issue with others via email / messaging tools

To be enhanced with new dashboards (e.g., CO2 emissions), new documents (e.g., Operators Manuals) and new Parts & Service features



# Example: Mixed Fleet Solutions

In the real world, our end-customers have a mixed fleet of equipment from different manufacturers.

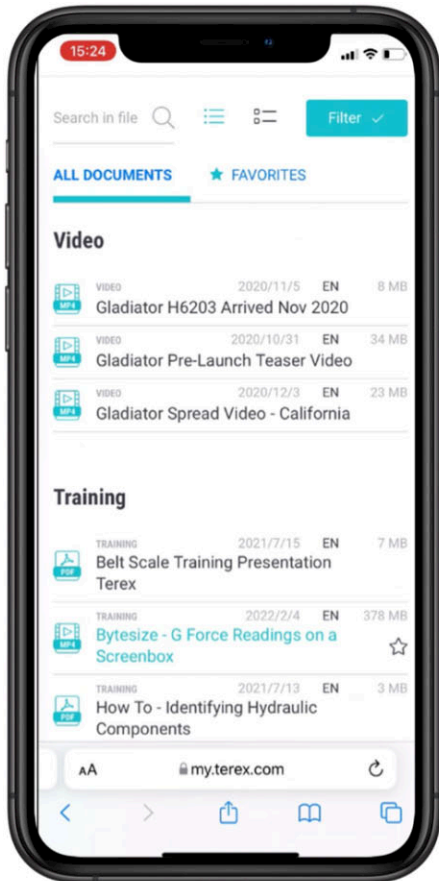


We plan to select and partner with established [mixed fleet mgmt. solution vendors](#), to:

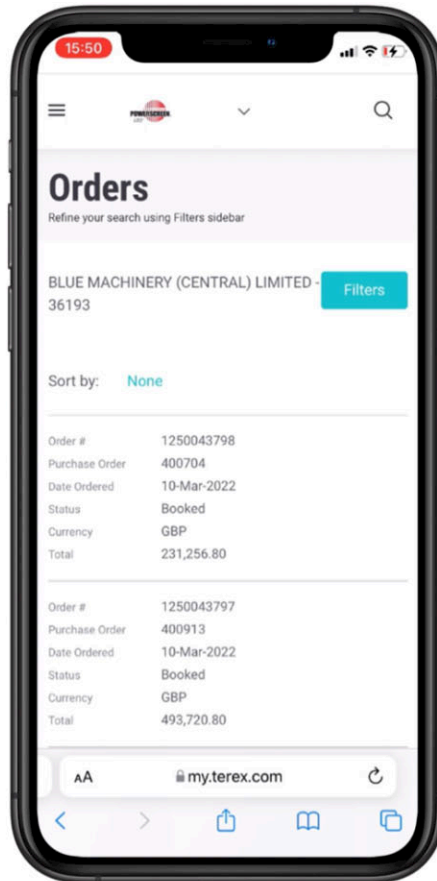
- [Connect seamlessly our machine](#) data into these white-labelled solutions
- Have a [preferential and easier access](#) for our end-customers
- [Integrate](#) these solutions [with our](#) (existing and future) [Terex solutions](#) such as online operator manuals, parts catalogues, eCommerce, Service Calculator, CPQ.. to drive better [customer experience](#) and grow our [business opportunities](#) for us and our dealers



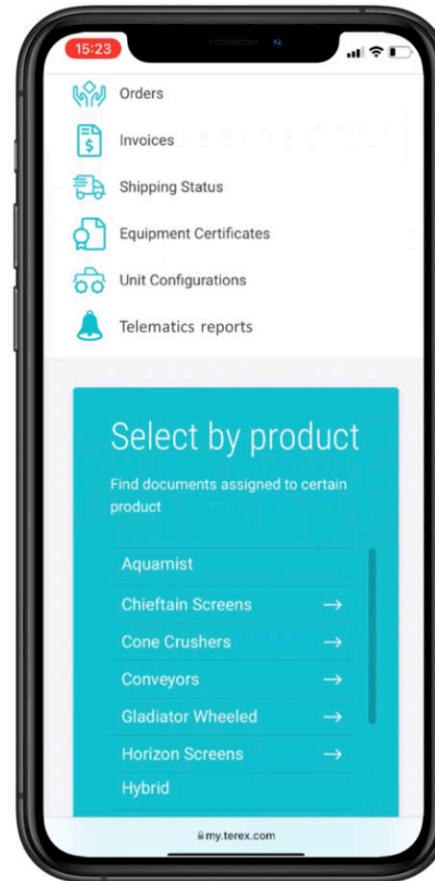
# Example: Dealer Portal



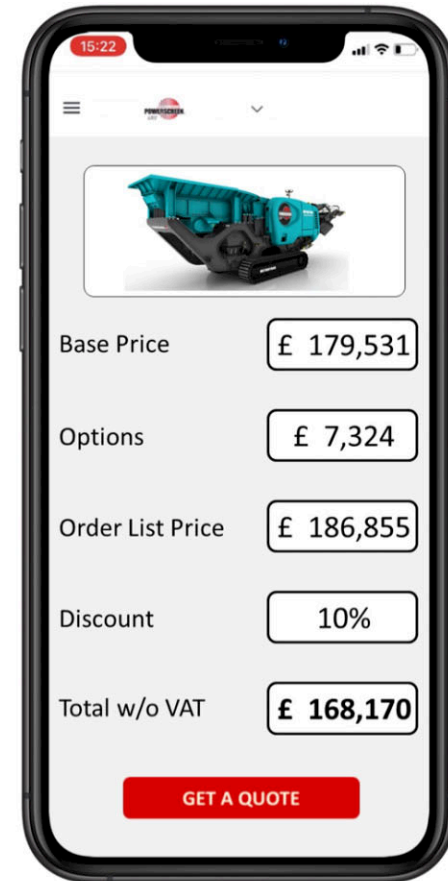
**LIVE.** Product, Marketing, Training material access



**TEST.** Self-service order, shipment, invoice reports



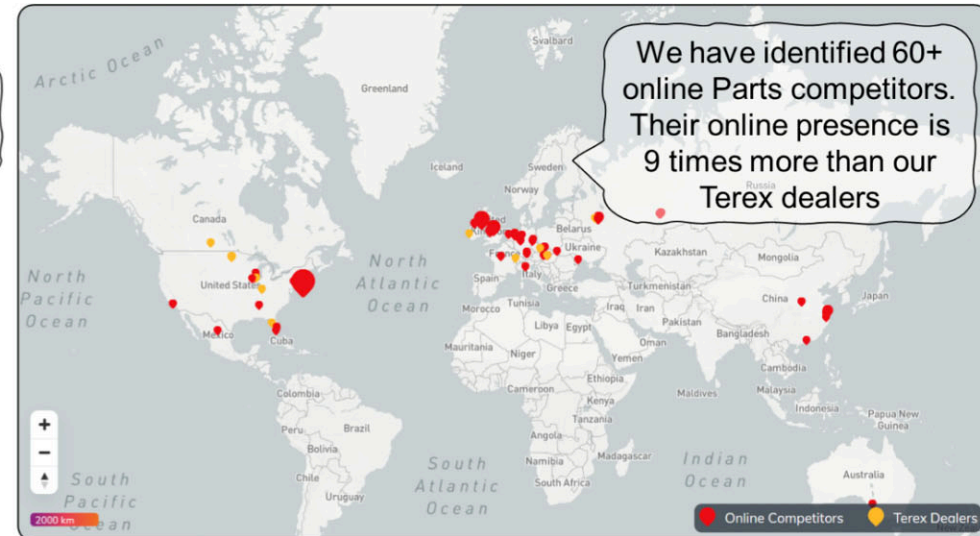
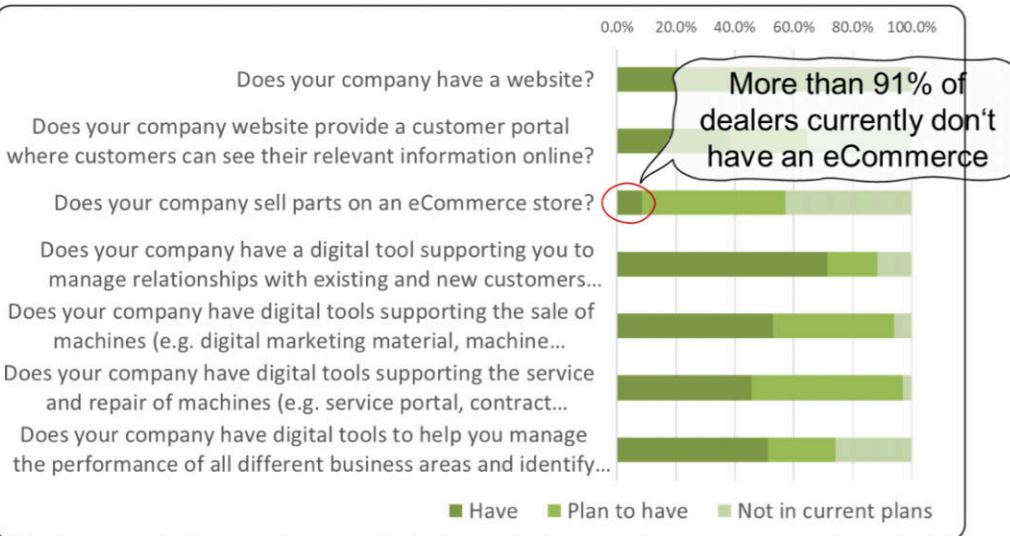
**DESIGN.** Telematics & Parts Dashboard



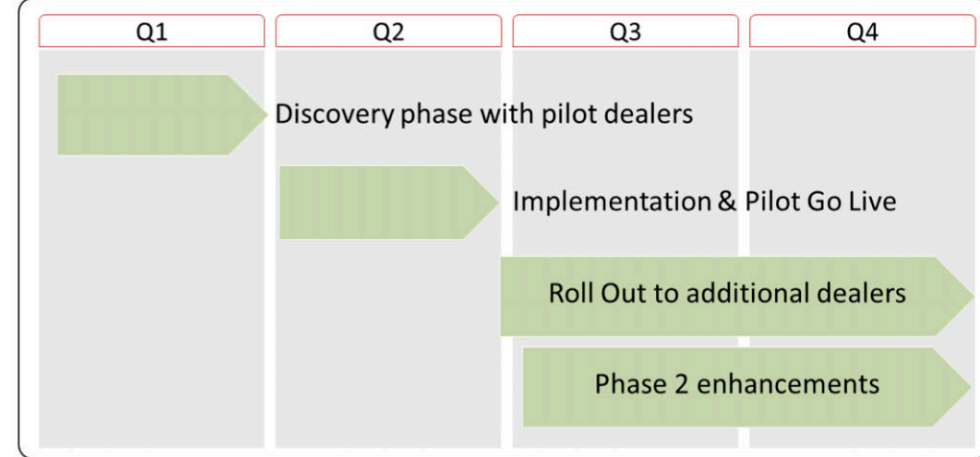
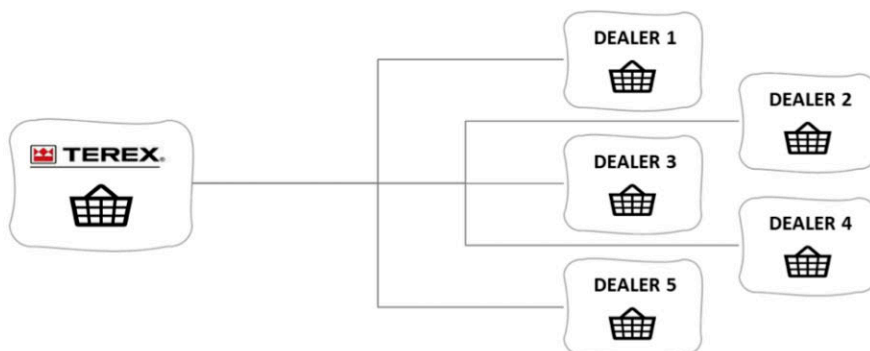
**DISCOVERY.** CPQ, Digital Order Forms, TCO & Service Calculator



# Example: Dealer e-Commerce



## Dealer specific ecommerce sites based on a common Terex template





# Example: Dealer e-Commerce



Terex

DMS



Dealer Branded

Multi OEM

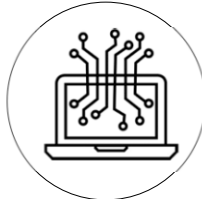
Robust Parts Search

Intuitive & Easy to use

Order & Invoice Enquiry

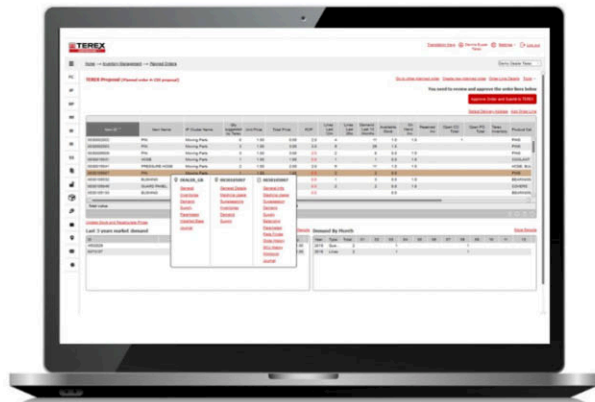
CDI & DMS Integrated

Fully Mobile

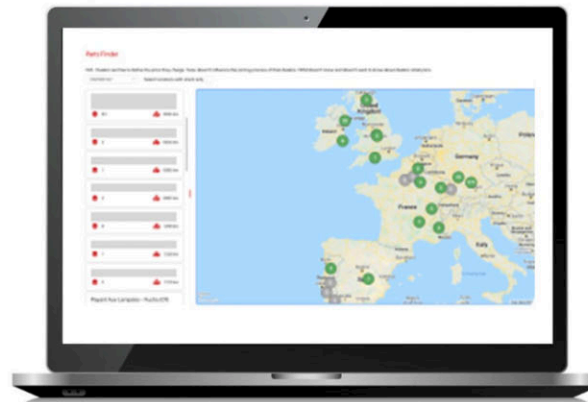




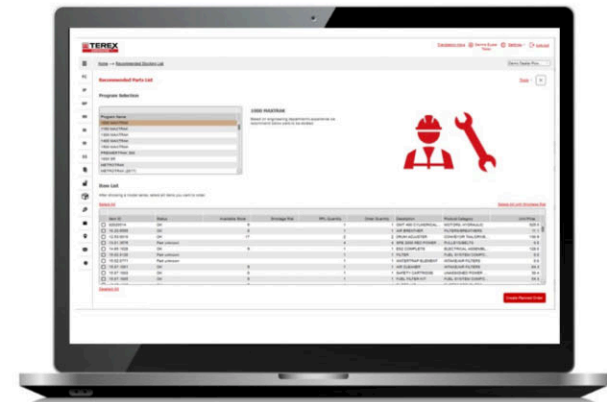
# Example: Connected Dealer Inventory



**Automatic Parts Inventory Planning & Replenishment**



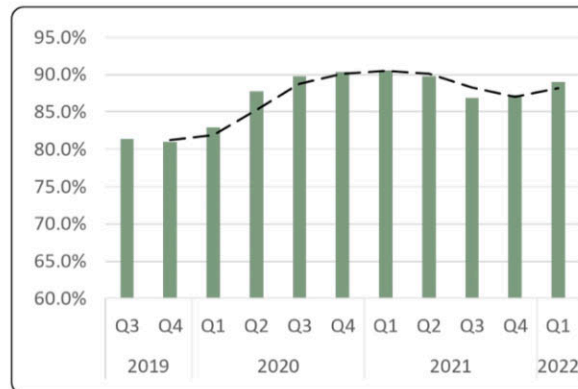
**Dealer Parts Finder**



**Telematics based Service Management**



**DMS / TMS integration**



**Retail Fill**

**CDI - Connected Dealers & Roll Out Progress**

	2019/20 connections (+19)	2021 connections (+28)	Q1 2022 Pipeline (+15)	2022 Pipeline (+35)
PS	PS Equipment, PS Equipment, PS Equipment	PS Equipment, PS Equipment, PS Equipment	PS Equipment, PS Equipment, PS Equipment	PS Equipment, PS Equipment, PS Equipment
Fraser	Fraser Equipment, Fraser Equipment, Fraser Equipment	Fraser Equipment, Fraser Equipment, Fraser Equipment	Fraser Equipment, Fraser Equipment, Fraser Equipment	Fraser Equipment, Fraser Equipment, Fraser Equipment
Fuchs	Fuchs Equipment, Fuchs Equipment, Fuchs Equipment	Fuchs Equipment, Fuchs Equipment, Fuchs Equipment	Fuchs Equipment, Fuchs Equipment, Fuchs Equipment	Fuchs Equipment, Fuchs Equipment, Fuchs Equipment
Ernstec	Ernstec Equipment, Ernstec Equipment, Ernstec Equipment	Ernstec Equipment, Ernstec Equipment, Ernstec Equipment	Ernstec Equipment, Ernstec Equipment, Ernstec Equipment	Ernstec Equipment, Ernstec Equipment, Ernstec Equipment
MPS	MPS Equipment, MPS Equipment, MPS Equipment	MPS Equipment, MPS Equipment, MPS Equipment	MPS Equipment, MPS Equipment, MPS Equipment	MPS Equipment, MPS Equipment, MPS Equipment
Crane	Crane Equipment, Crane Equipment, Crane Equipment	Crane Equipment, Crane Equipment, Crane Equipment	Crane Equipment, Crane Equipment, Crane Equipment	Crane Equipment, Crane Equipment, Crane Equipment
Genie	Genie Equipment, Genie Equipment, Genie Equipment	Genie Equipment, Genie Equipment, Genie Equipment	Genie Equipment, Genie Equipment, Genie Equipment	Genie Equipment, Genie Equipment, Genie Equipment

**Roll Out**



# Example: CDI - Machine Service



Materials Processing

**TEREX**  
Machine Services  
Service Review All services

Total 1089 Past 802 Next 4

All services

Service column	Name	Location id	Description	Customer	Serial number	Brand
	P1330 - 2500h Service	BLUE_PS_06	Working Hours: 2023, La...	SELECT STONE	PDP1330POM32564	Power
	P1400HCS - 2000h S...	BLUE_PS_06	Working Hours: 1803, La...	Tippers R Us	PDP1400HOM56953	Power
	30400 - 5500h Service	BLUE_PS_06	Working Hours: 5305, L...	PR PLANT	PDP1400POM542189	Power
	Powertrak 750 - 750h Se...	BLUE_PS_06	Working Hours: 529, La...	BLUECENTRAL	PID00137IDGM75805	Power
	WR1400K - 5000h Serv...	BLUE_PS_06	Working Hours: 4827, La...	BRETT AGGREGATES	PID00133LDGR1666	Power
	P1400HACS - 2500h S...	BLUE_PS_06	Working Hours: 2290, La...	BLUECENTRAL	PDP1400HOM50230	Power
	CH1700K - 250h Service	BLUE_PS_06	Working Hours: 30, Last...	BLUECENTRAL	PDP1502BCDGN27404	Power
	1150MX1CS - 6000h Se...	BLUE_PS_06	Working Hours: 5616, La...	ARMS TRONG AGGREG...	PID11MX1HOM8639	Power
	30400PS - 8000h Serv...	BLUE_PS_06	Working Hours: 7839, La...	BULLMOORE SAND & ...	PDP1400LOMG72723	Power
	CH2200 - 3000h Service	BLUE_PS_06	Working Hours: 2829, La...	ARMS TRONG AGGREG...	PID00136HDL52937	Power
	CH2100K - 2000h Serv...	BLUE_PS_06	Working Hours: 1896, La...	BLUECENTRAL	PID0012ACDGM55317	Power
	30400 - 250h Service	BLUE_PS_06	Working Hours: 18, Last...	Thomas Compton	PDP1400LOMG52413	Power
	WR1400K - 750h Service	BLUE_PS_06	Working Hours: 527, Last...	GREENTEC EQUIPMEN...	PID00133JDL83959	Power
	CH2200 - 1500h Serv...	BLUE_PS_06	Working Hours: 1355, La...	P	PID00136CDGM24570	Power
	P1400HA - 1000h Service	BLUE_PS_06	Working Hours: 856, La...	LANCASHIRE CRUSHERS	PDP1400JOMM56609	Power

Service due: CH2100X - 250h Service

Machine Details: Powerscreen S/N: PID00124CDGM55317

Blue Machinery  
services@bluegroup.uk  
0345 217 875  
Appleton Thorpe Estate, Warrington

Contact us

Reopen Reject Confirm Email Notification

Select batch service action

Services parts Services tasks

Service column	Item id	Item description	Known part	Required quantity	Order quantity	Unit price	Total price	Available stock	Open CO	Open PO
	12890229	SMALL AIR FILTER FO...	✓	1 (multiples 1)	0	17.60	0.00	1	0	0
	12890228	LARGE AIR FILTER FO...	✓	1 (multiples 1)	0	35.90	0.00	1	0	0
	10.21.3413	RETURN LINE FILTER	✓	1 (multiples 1)	3	116.63	349.89	-2	0	0
	06760705	SUCTION FILTER SE 1...	✓	3 (multiples 1)	3	24.65	73.95	0	0	0
	65506574	CA 4 CRANKCASE BR...	✓	1 (multiples 1)	1	47.60	47.60	0	0	0
	65502409	FUEL FILTER (same as ...)	✓	2 (multiples 1)	2	28.26	56.52	0	0	0
Total							999.27 £			

Select all with shortage Select all Deselect all Add row Create planned order (6)

## Terex CDI Machine Services Module

- Provides an overview of machine usage to dealer
- Facilitates Service Planning by monitoring upcoming services and service parts availabilities at the dealer
- Enables dealer to build custom "Service Due Notifications" and send them to their customer base
- Leverages existing Dealer and Terex integrations
  - Terex Telematics, Pricing, and Stock Data
  - Dealer Stock Data
  - Order Integration to Terex and Dealer



# Example: Service Calculator & TCO



By EoY, we plan to implement an **online tool** for Terex, dealers & end-customers **to calculate** (and edit as needed) their **total service requirements** (parts & labor) for Terex machines as well as an **online calculator of the total cost of ownership** of Terex machines over time, including all costs elements such as fuel consumption, service, amortization, travel, etc.

## SERVICE CALCULATOR

The Service Calculator mobile app interface displays machine information (Brand, Series, Model, Serial Number) and service parts. It includes a table for service parts with columns for Service Interval, Service Title, Required Labour Hours, and Parts Price. Below this, there are sections for Parts of selected Service Interval and Wear Parts, each with a table for Part Number, Part Description, Quantity, and Total Price.



## TCO

The Total Cost of Ownership Calculator laptop interface displays machine information (Brand, Series, Model, Serial Number) and a table for Total Costs of Ownership. The table includes columns for Cost Type and Amount. The costs listed are: Ownership Cost (119,500 €), Running Cost (415,800 €), Operator Cost (189,000 €), Fuel Cost (226,800 €), Service Cost (17,725 €), Labour Cost (2520 €), and Parts (15,305 €). The Total Cost is 944,825 €, with a per hour cost of 100.75 € and a per ton material crushed cost of 5.44 €.



## Key words

DEALER / CUSTOMER FACING - WEB - MOBILE - TMS INTEGRATED - MULTI BRAND - USER CONFIGURABLE - EXPORTABLE - SSO ENABLED - SCALABLE - SECURE - EASY TO USE



- **Customers expect** more and more to be able to run their business and their transactions with us in a **faster and easier** way
- **Digital** Solutions are becoming a fundamental **competitive advantage**
- Digital Transformation is absolutely critical to grow our business sustainably, deliver best customer experience and **stay ahead of competition**
- OEMs will achieve hardly any benefit from Digital Transformation if their **distribution partners** do not transform digitally as well
- Terex is investing extensively into **new Digital Solutions** for Dealers and Customers
- We **partner** with solution & implementation **vendors** and **co-invest** with our **dealers** to achieve our common ultimate objectives of delivering best-in-class **customer experience**, maximizing our and our dealers' **profitability**

