



Igus® GmbH, Germany

Muhammed Gencol
Sales Manager/Key Account Manager Cranes

Agenda:

1) igus® GmbH, Germany

2) e-chain® types development:



3) Smart Plastics:

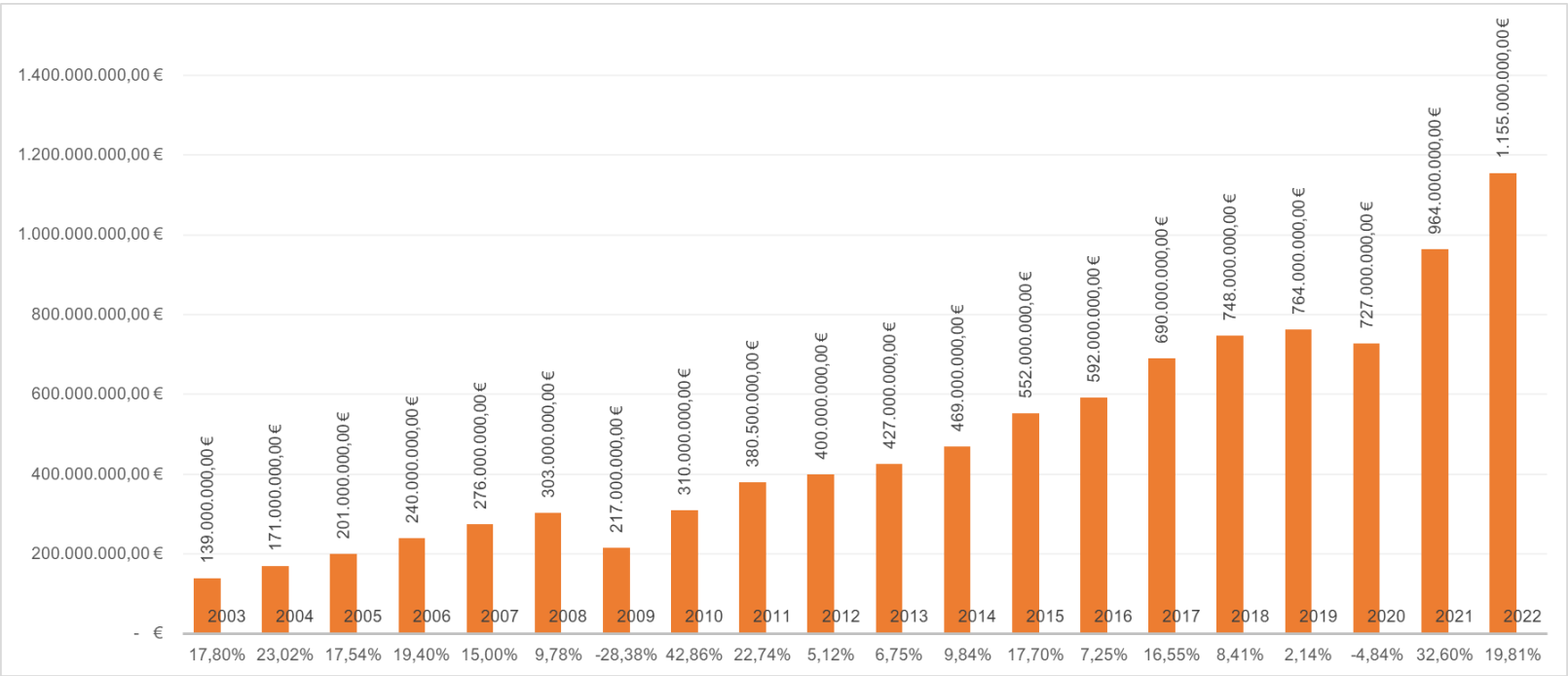
- i.Sense®, condition monitoring
- i.Cee®, predictive maintenance





igus® - Headquarter Cologne Germany

- Established 1964
- Wide range of products with echainsystems, lubrication free bearings, sensor technologies, shore power solutions and more
- 5,000 employees (about 2,500 in Cologne, 2,500 worldwide)
- 35 subsidiaries worldwide, over 50 certified Partners worldwide





Worldwide:

- ▶ 10,000* RTG's / RMG's
- ▶ 2,200* STS
- ▶ More than 24.000* Spreader applications
- ▶ More than 65.000* Indoor-, Gantry-, Bulkhandling-, Shipyard- and Special-cranes

* April 2025



e-chain® types: 4040RHDB, P4.1, P4.HD

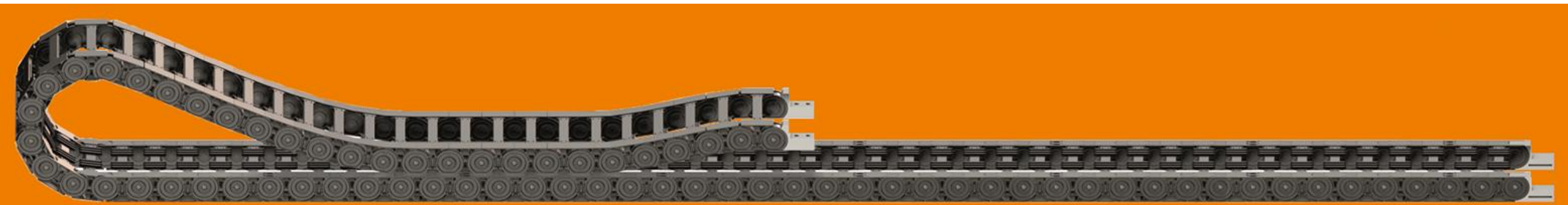


divided rollers

P4 rol e-chain®



P4.HD Heavy Duty rol-e-chain® series



- ▶ Longest service life with tribo-polymer bolts up to 30,000 Trolley hours (chain link connection)
- ▶ Increased chain side link stability (fork / shackle joint connection)
- ▶ Wider side links for complete roller support
- ▶ High speed (360m/min. & more)
- ▶ Low noise operation (optimized chain link design & radius brake)
- ▶ Low vibration



Turning motion plastics® into smart plastics®

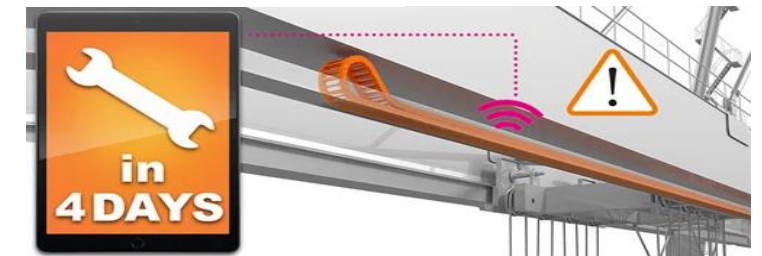
igus® smart plastics technologies:

► Predictive maintenance sensor technology

- Avoid unexpected downtimes
- Plan maintenance
- Extend maintenance intervals
- Event-related inspections

i.Cee

Predictive Maintenance



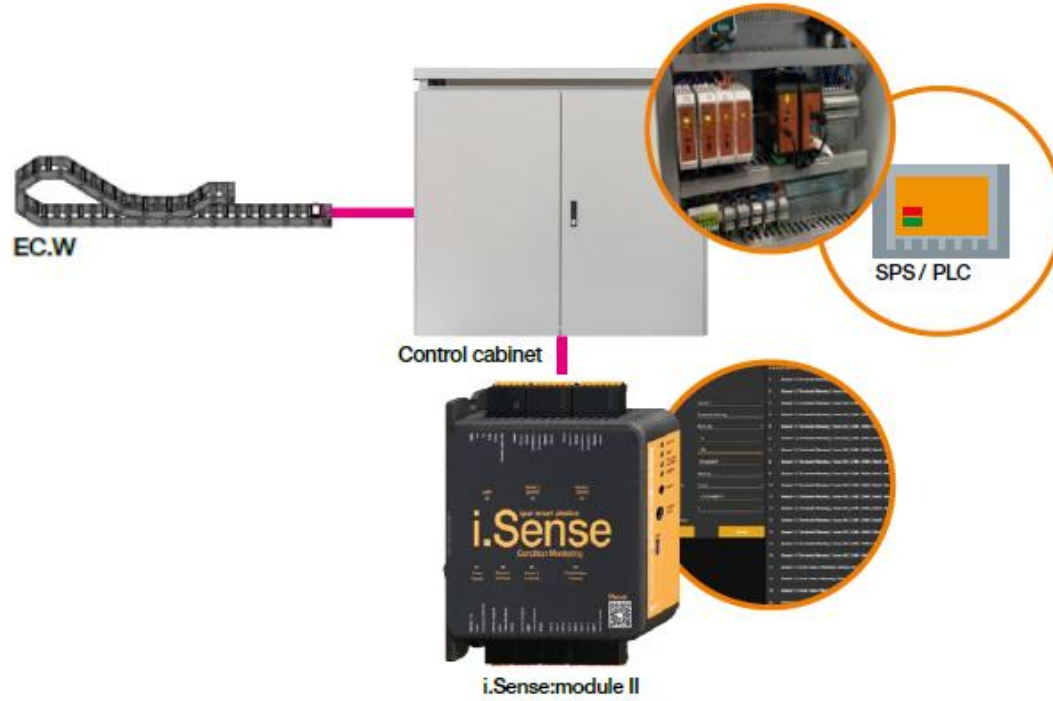
► Condition monitoring sensor technology

- Increase operational safety
- Greater equipment efficiency
- Constant surveillance

i.Sense

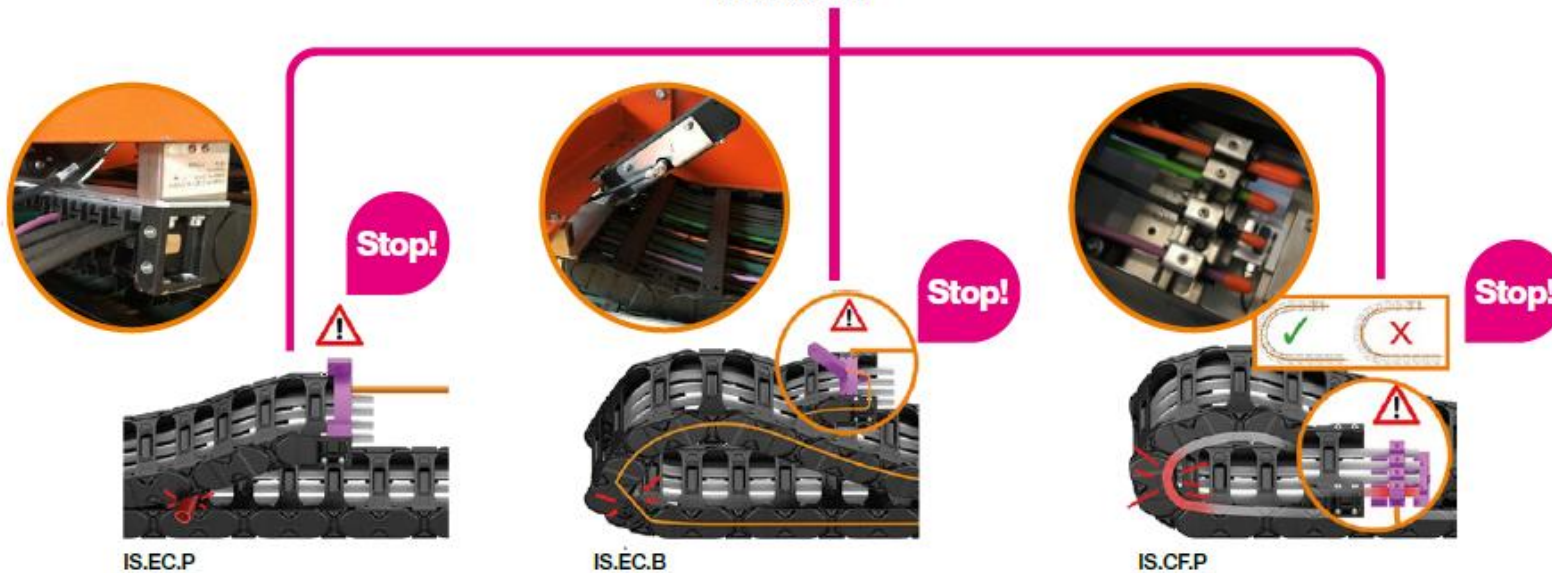
Condition Monitoring



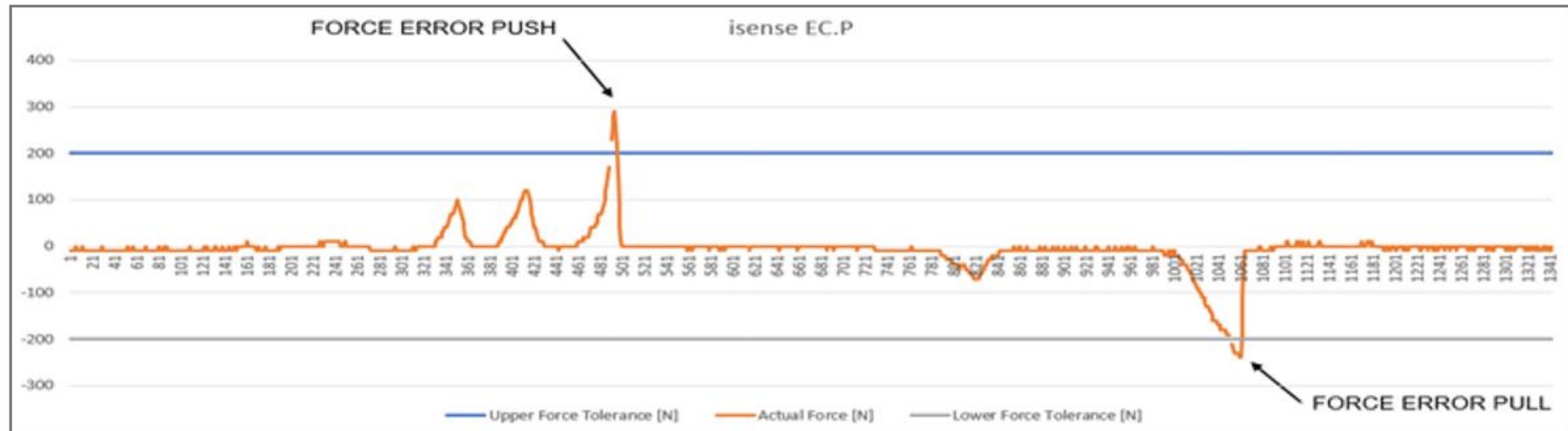
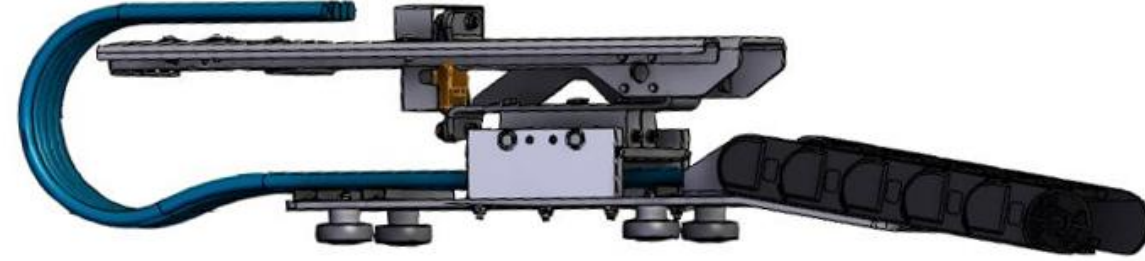


i.Sense

Condition Monitoring

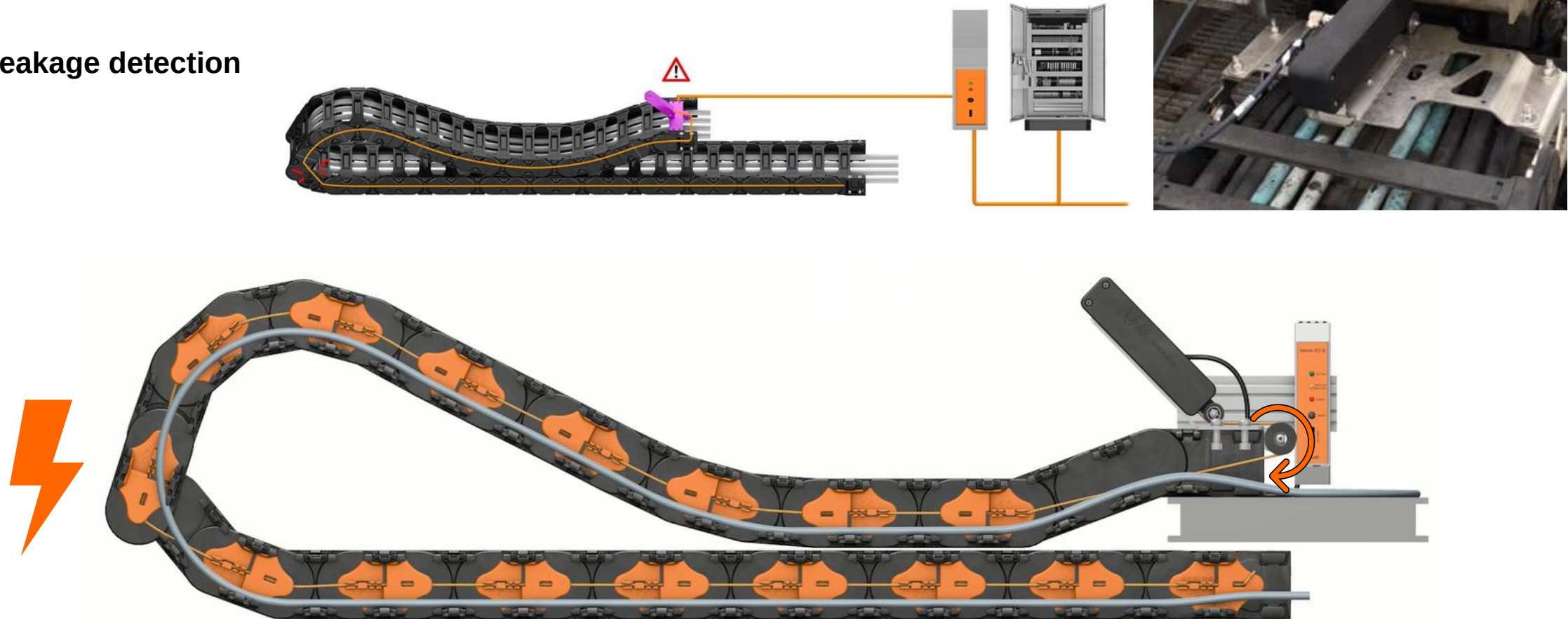


EC.P Push/pull force monitoring



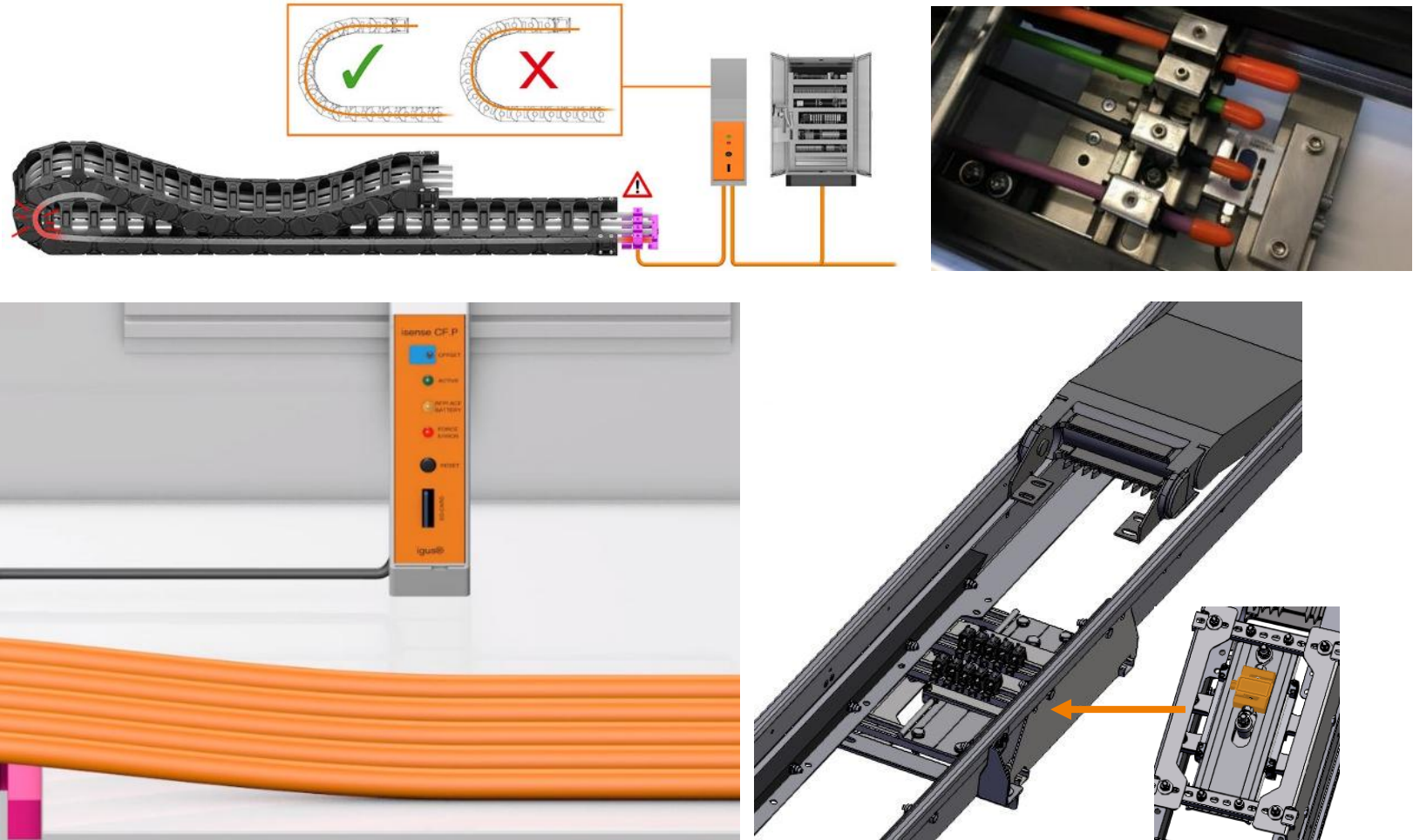
- ▶ EC.P: measurement of the push / pull forces at the moving end of the chain, with a load cell and evaluation unit, during operation.

EC.B e-chain® breakage detection



- ▶ EC.B: A sensor detects a chain breakage at its initial stage. The signal can be used to shut down the system before an expensive complete shutdown is caused.

CF.P Cable force monitoring



- ▶ CF.P: Detects increased tensile forces on cables in e-chain systems®. Allows for corrective action before cable damage occurs.

EC.IT e-chain® lifetime sensor



- ▶ EC.IT: contactless monitoring of rol-e-chains during operation. The sensor determines percentual lifetime status of the chain and sends the data to the Superwise platform or the local i.Cee module.

i.Cee Dashboard

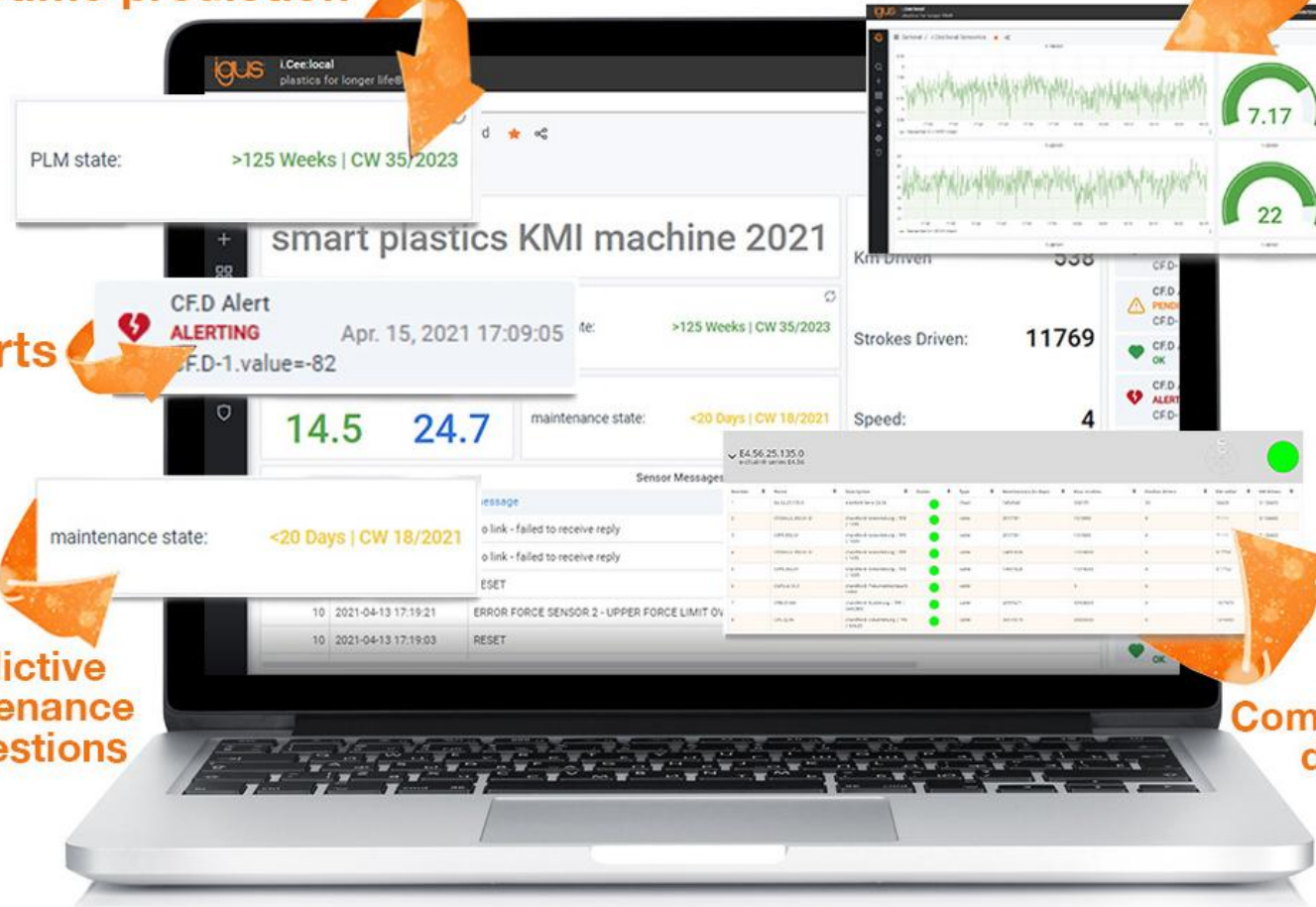
Lifetime prediction

Sensor readouts

Alerts

Predictive maintenance suggestions

Component data



igus® the-chain ... moving energy made easy
...e-chainsystems®...e-chain®...readychain®...chainflex®-cables

motion plastics®
Tech up. Cost down.
Innovation
Clean
Digital

igus®

KULI hebezeuge
HELMUT KEMPKE

SIEMENS

UBE / UBE MACHINERY CORPORATION, LTD.

Sumitomo
Heavy Industries, Ltd.

BANG
KRANSYSTEME

stinis

MORRIS
MATERIAL HANDLING®

KOCKS

mbe McNally Bharat
Engineering Company Limited

BROMMA

NH HOIST
NIPPON HOIST CO., LTD.

Kalmar

ZPMC

LIEBHERR



Kw
Kranwerke AG

SANY

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Geräte - Krane - Umbauten - Service

ABB

KIROW

kühn

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It's all about Imagineering

DHHI DALIAN HUARUI HEAVY
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Realize your dreams

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Saalfelder
Hebezeugbau GmbH

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CRANES

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SPREADERS

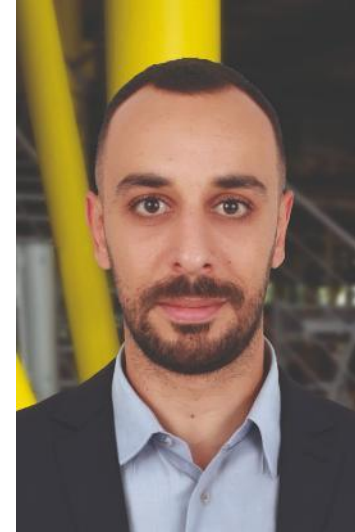
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Thank you!



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