

Bringing more insight  
and performance to you.

CONSTANTLY  
IMPROVING

# GEA PerformancePlus:

## Value creating service level options beyond routine preventive maintenance

A service concept for all kind of databased  
services, by using an online condition  
monitoring tool

ANSELM SCHOENMAKERS – GEA

15TH OF MAY 2019 – ISLA SUMMIT - ROTTERDAM





## Anselm Schoenmakers – Head of Extended Life Services

Employed with GEA since: 2003

Department: Extended Life Services

Service Product Management

GEA Global Service – GEA Group



Agricultural University Wageningen – Mechanical Engineering - 1984

Several jobs in different positions, in product-, sales- and general management

In different companies in NL and DE, in the complete business chain : dealer, importer, manufacturer

Since 2012 in Service Development



- 1 GEA at a Glance
- 2 GEA PerformancePlus
- 3 Technical Solution
- 4 Technical Support
- 5 Service Sales
- 6 Next steps



- 1 **GEA at a Glance**
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# GEA – “engineering for a better world”

GEA is one of the largest suppliers of process technology to the food industry and to a wide range of other industries.



**17,863**  
employees (FTEs)



**4,605**  
million revenue (EUR)

The company is listed on the German MDAX stock index (G1A, WKN 660 200) and included in the STOXX® Europe 600 Index.

In addition, the company is listed in selected MSCI Global Sustainability Indexes.



**4,751**  
million order intake (EUR)

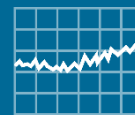
The international technology group focuses on process technology, components and sustainable energy solutions for sophisticated production processes in diverse end-user markets.



**564**  
million operating  
EBITDA (EUR)



**12.2**  
% operating  
EBITDA margin



**1.31**  
earnings per share (EUR)



# Strong local presence around the globe

## North America

👤 1,763  
€ 846 million  
% 18

## Latin America

👤 471  
€ 317 million  
% 7

## North and Central Europe

👤 2,927  
€ 583 million  
% 13

## DACH & Eastern Europe

👤 6,398  
€ 944 million  
% 21

## Asia Pacific

👤 2,904  
€ 1,027 million  
% 22

## Western Europe, Middle East & Africa

👤 3,401  
€ 889 million  
% 19

- 📍 GEA locations  
(sales office, service branch or  
other GEA sites)
- 👤 Employees in 2017 (FTEs)
- € Revenue in 2017
- % Regional revenue split in 2017 (only continued operations)



# Our applications – in touch with GEA every day

## Dairy Farming and Processing



**Approx. one quarter of processed milk** comes from GEA production systems

## Food



**Every third chicken nugget** is produced using GEA technology



**Approx. every third process line** for instant coffee was installed by GEA

## Beverages



**Approx. every second liter of beer** is brewed with the aid of systems and process solutions from GEA

## Pharma



**Every fourth liter of human blood** for making plasma-derived products is processed using GEA equipment

## Chemical



**More than one third of all polymer producers** are using GEA drying technology

## Utilities



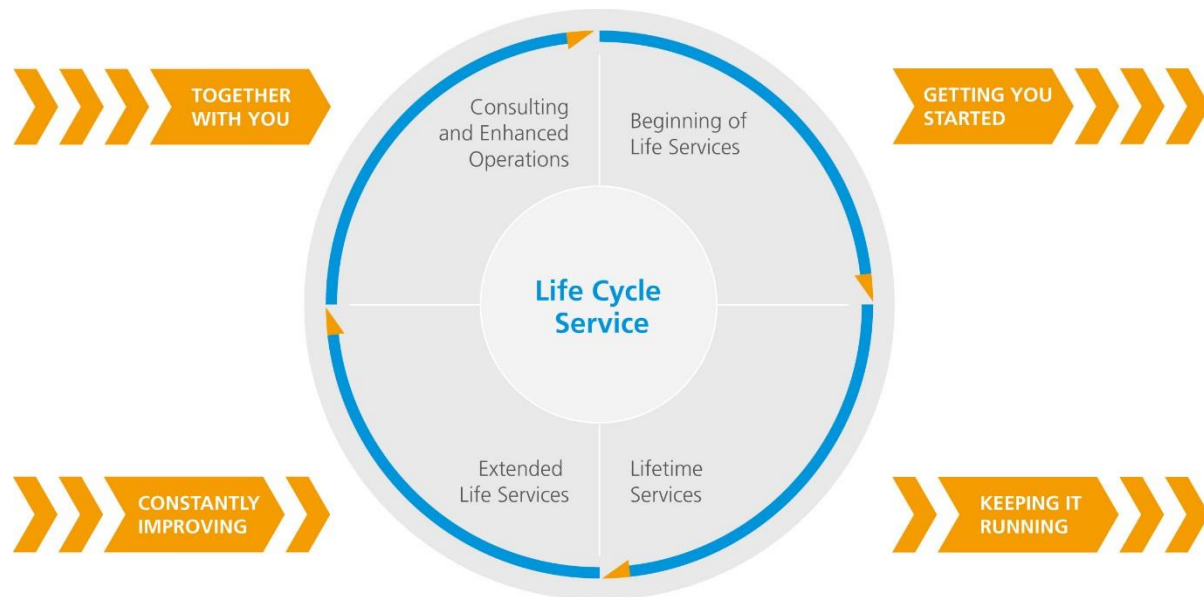
**Each industry we serve** utilizes industrial refrigeration technology from GEA

## Marine



**Every second container ship** in the world sails with GEA marine equipment on board





We ensure our customers' **continued business success** by building, maintaining, optimizing and adapting their production equipment and processes to meet their specific ongoing needs.



**WE SERVE THE ENTIRE LIFE CYCLE IN ORDER TO HAVE CONTINUOUS TOUCHPOINTS TO OUR CUSTOMERS.**



1

GEA at a Glance

2

**GEA PerformancePlus**

3

Technical Solution

4

Technical Support

5

Service Sales

6

Next steps



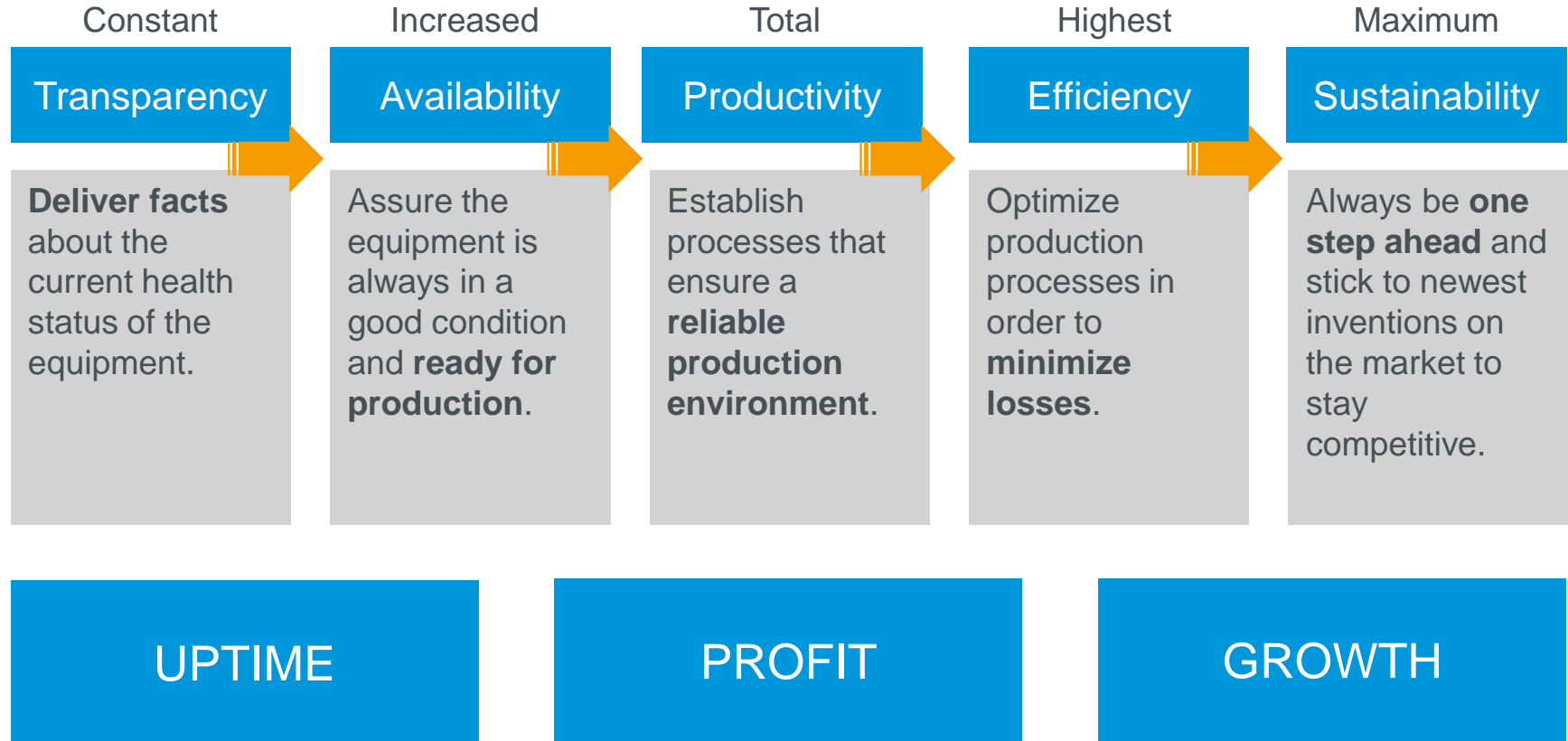
- New Service Concept Ensures Optimum Productivity

Bringing more insight  
and performance to you.

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# To fulfill your performance targets





## Elements

I Condition Monitoring portal : technical solution

II CSIC-concept : technical support concept

III GEA PerformancePlus : service sales concept



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GEA at a Glance

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GEA PerformancePlus

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**Technical Solution**

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Technical Support

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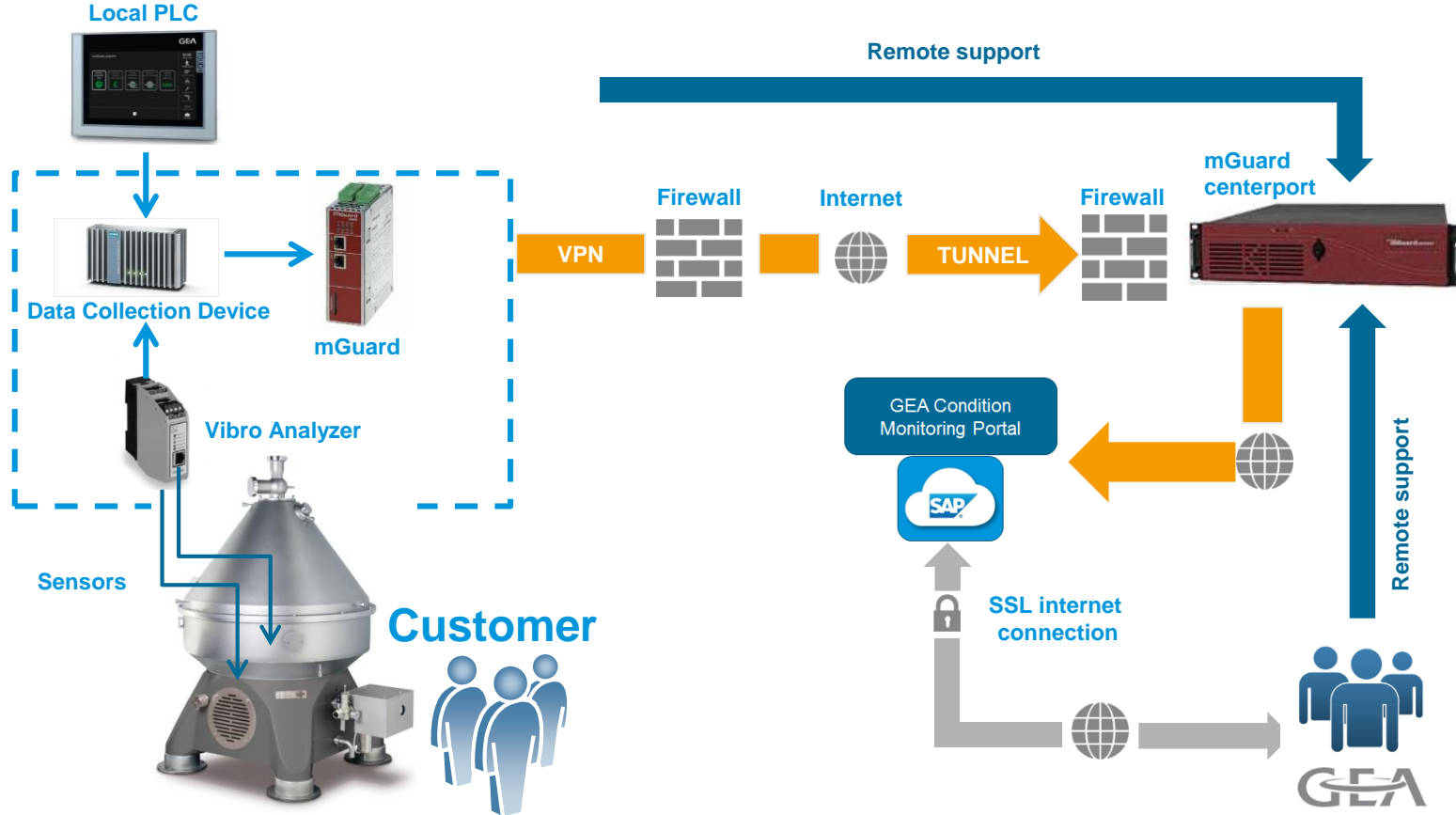
Service Sales

6

Next steps

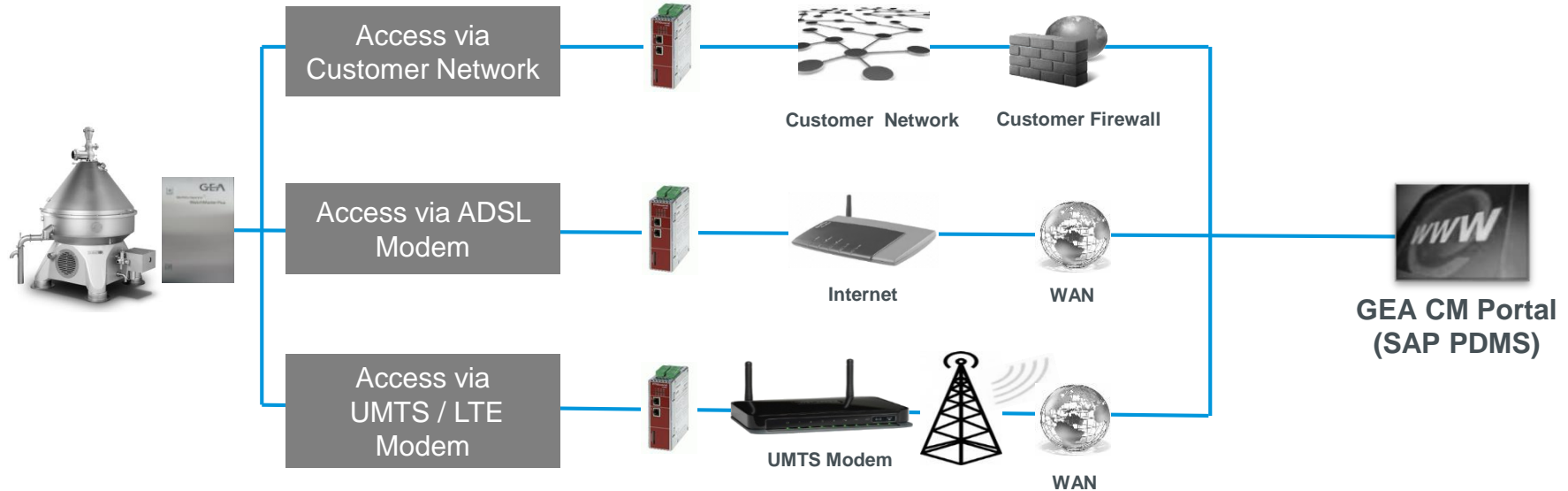


# GEA PerformancePlus Set Up



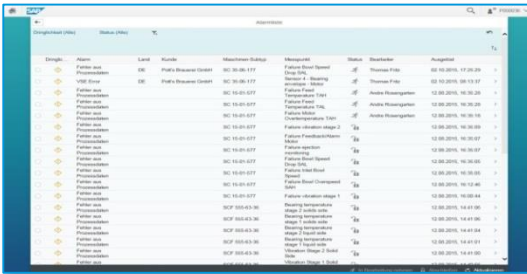


## Three different connection possibilities to the Internet.





**GEA** engineering for  
a better world



Alarme nach Status

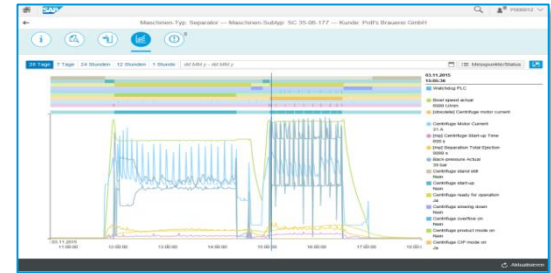
Alarme nach Status

Kategorie

Offen  
Beendet

Offen & in Bearbeitung

Kategorie	Offen	Beendet
Falsch	6	1
Richtig	28	9





1

GEA at a Glance

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GEA PerformancePlus

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Technical Solution

4

**Technical Support**

5

Service Sales

6

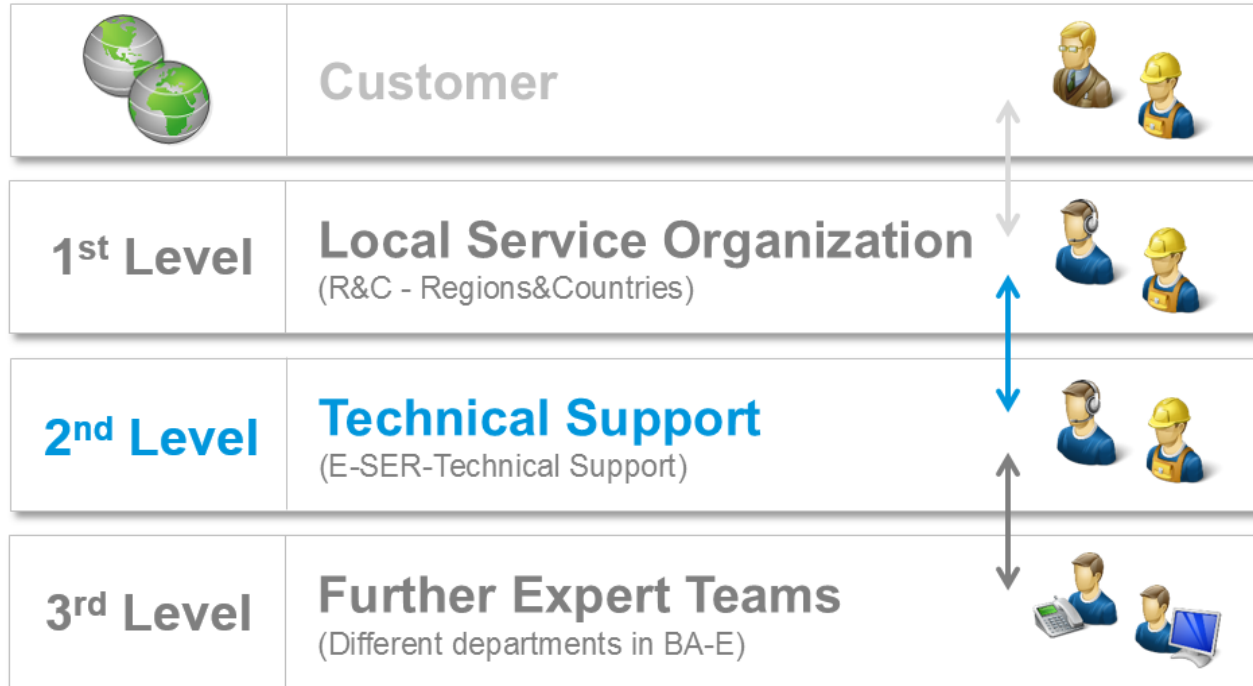
Next steps



# CSIC

## Customer Support Intelligence Center

“Service is local” – **CSIC** is **2<sup>nd</sup>** Level Support

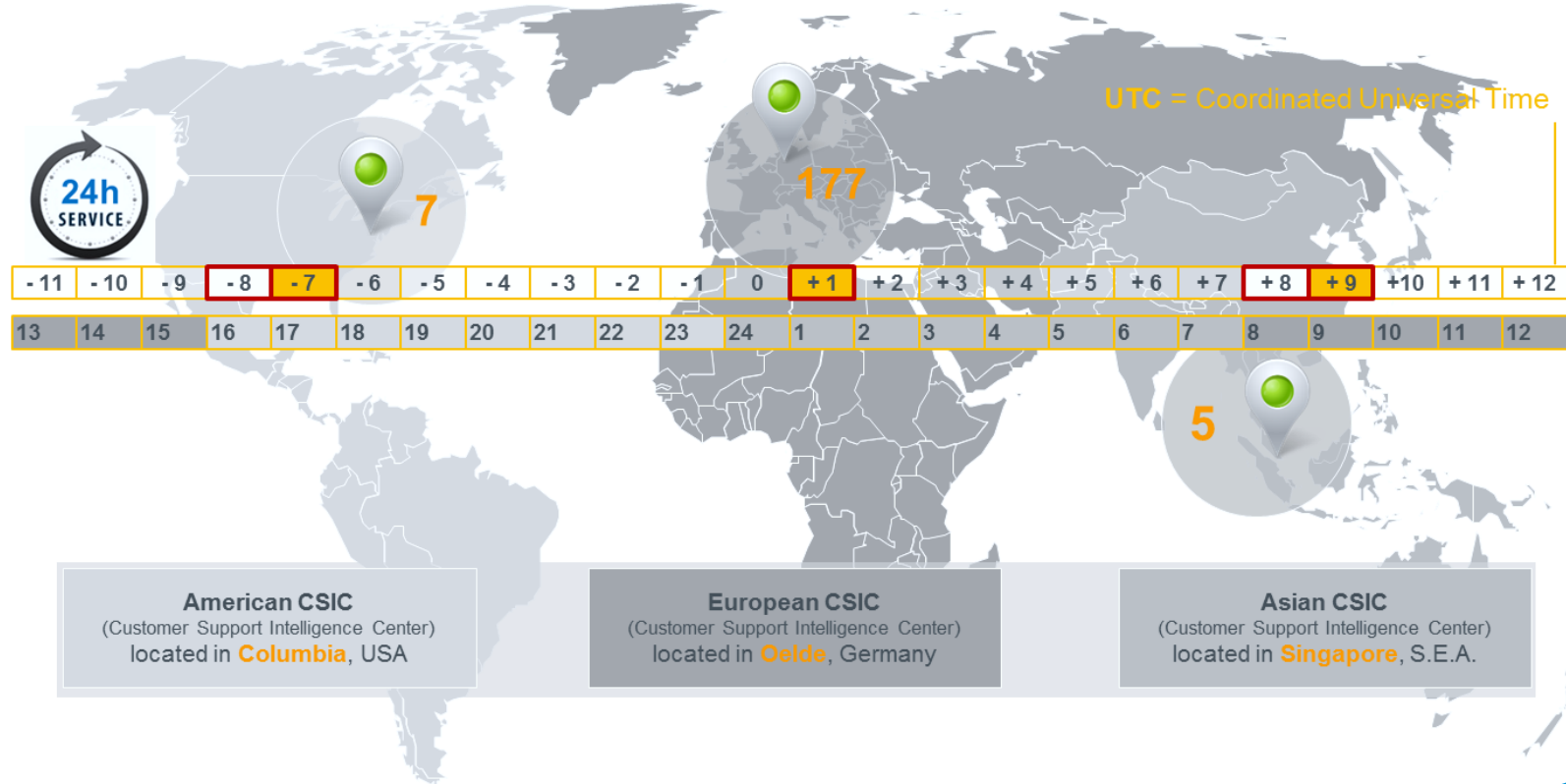




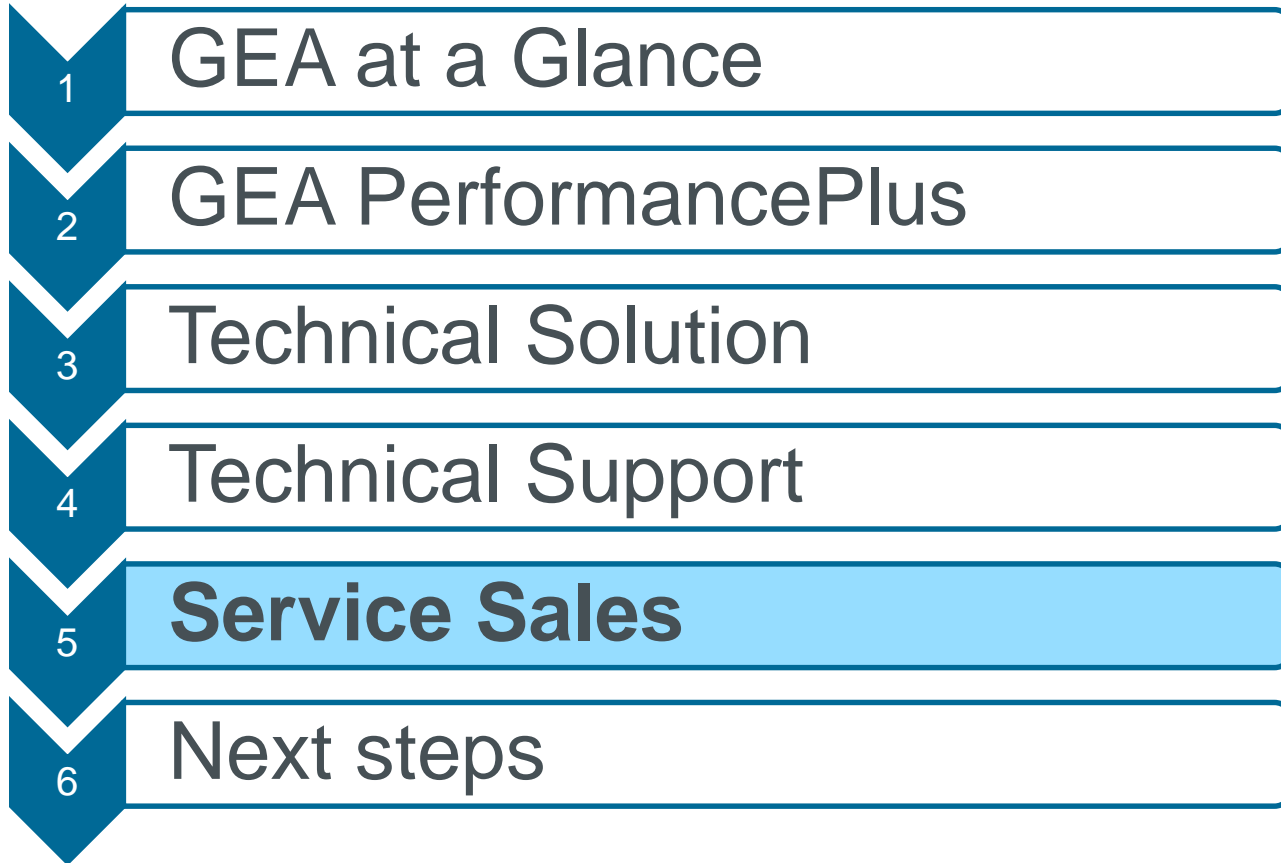
# CSIC - Customer Support Intelligence Center

CSIC and service Hubs - decentral approach | Global set-up

Availability of Expert Team ..... 8/5 → 24/5 → 24/7







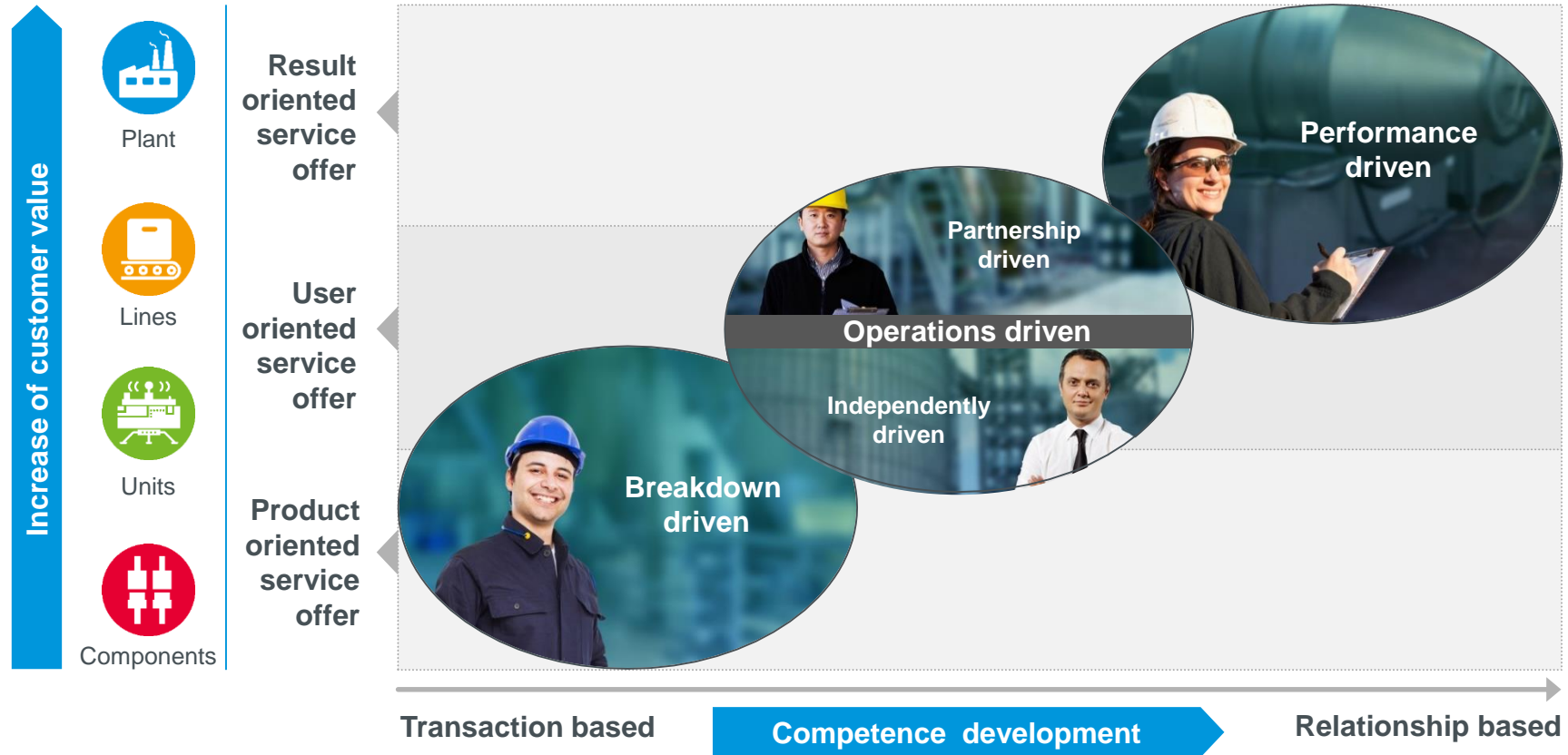




By combining **modern condition monitoring technologies** with GEA's world-leading industry expertise, we can provide you with **maintaining, monitoring, analyzing** and **optimizing** services that address the different and varied challenges that you and your company face on the way to achieving your performance-related goals.



# Customer segmentation / Service offer







## PerformanceCare

**for performance driven /  
long-term focus**

*We take care of machine and process*



## PredictiveCare

**for independently driven**

*We provide real-time machine info –  
online*



## ProactiveCare

**for partnership driven**

*We recommend optimization of machine and offer  
optional process monitoring and optimization*



## PreventiveCare

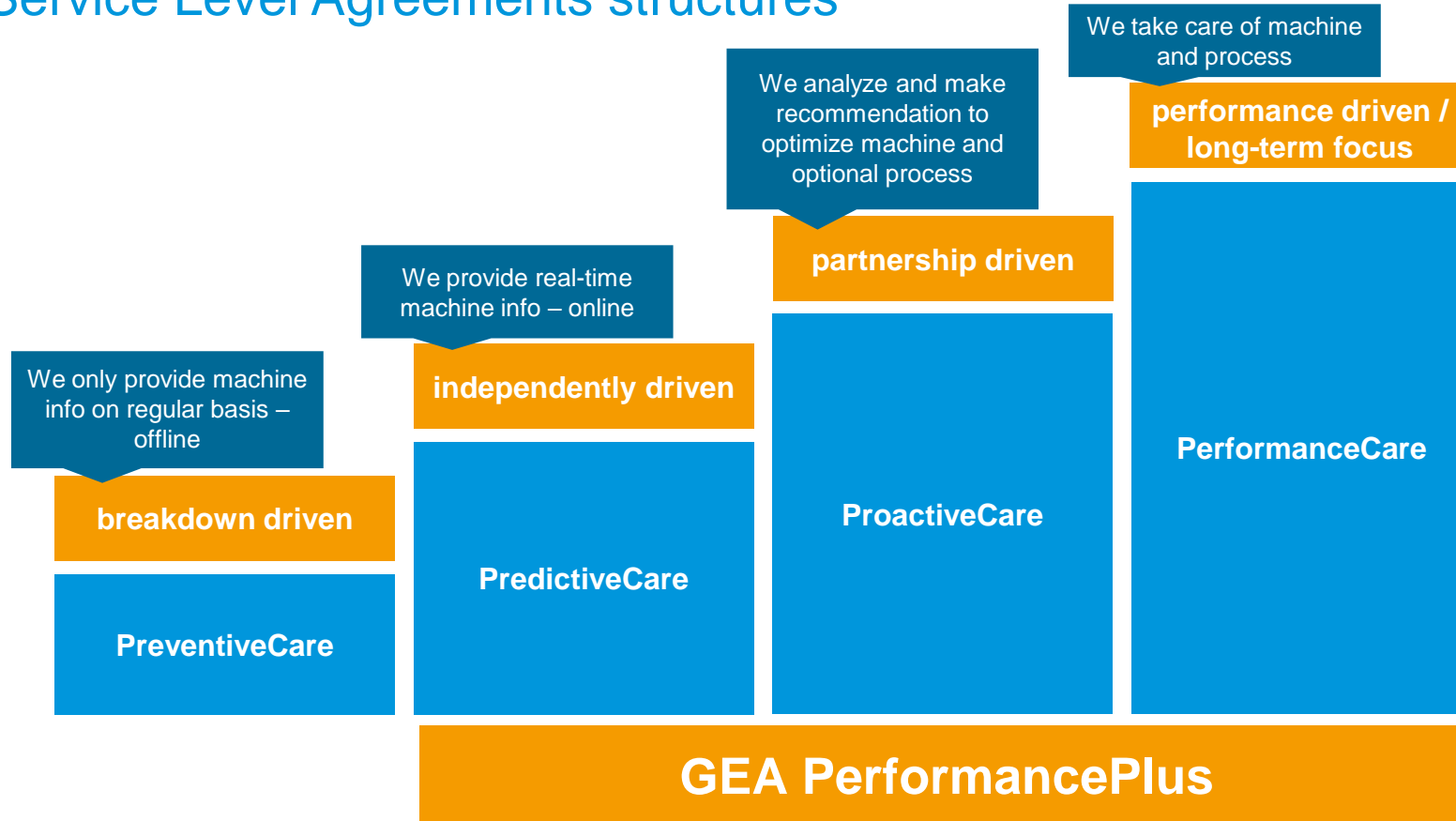
**for breakdown driven**

*We only provide machine info on regular  
basis – online is optional*

**GEA PerformancePlus**



# In a structured and flexible manner: Service Level Agreements structures



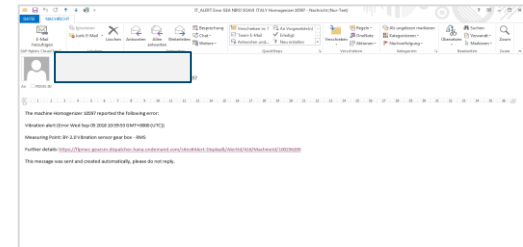
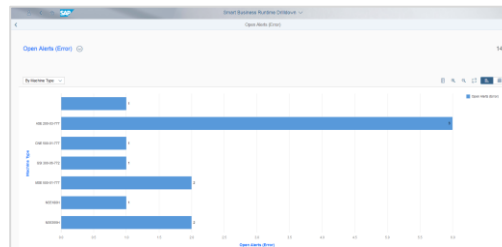
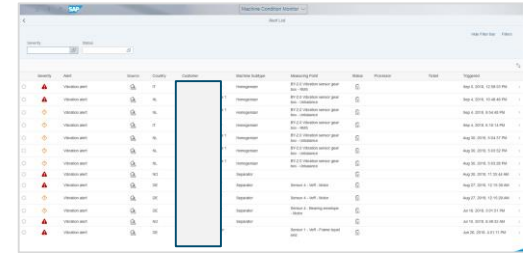
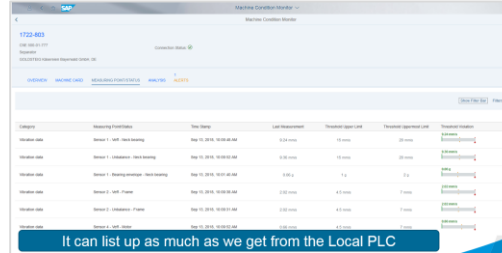
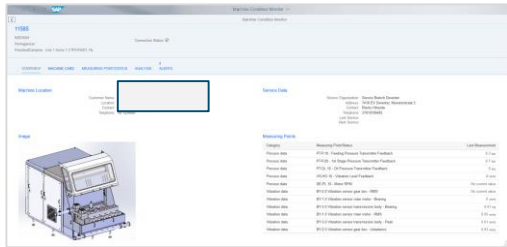
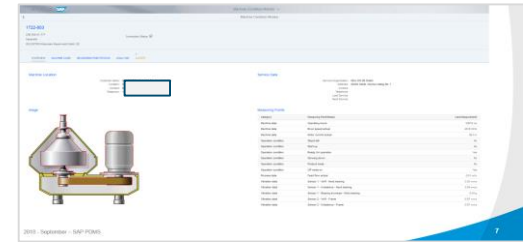
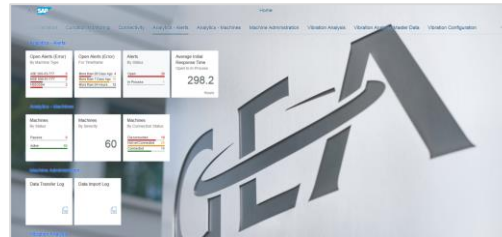
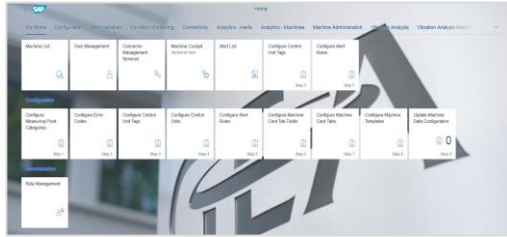


# 1: Maintaining and option for offline monitoring









## 2: Monitoring





# Overview Machine – Separator Example


   

Machine Condition Monitor 

< Machine Condition Monitor

1722-803

CNE 500-01-777  
Separator  
GOLDSTEIG Käseereien Bayerwald GmbH, DE

Connection Status 

OVERVIEW MACHINE CARD MEASURING POINT/STATUS ANALYSIS **1 ALERTS**

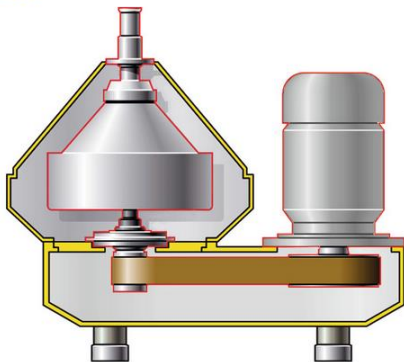
## Machine Location

Customer Name:  
Location:  
Contact:  
Telephone:

## Service Data

Service Organization: GEA WS DE GmbH  
Address: 59302 Oelde, Werner-Habig-Str. 1  
Contact:  
Telephone:  
Last Service:  
Next Service:

## Image



## Measuring Points

Category	Measuring Point/Status	Last Measurement
Machine data	Operating hours	32618 hrs
Machine data	Bowl speed actual	4816 RPM
Machine data	Motor current actual	88.4 A
Operation condition	Stand still	No
Operation condition	Start-up	No
Operation condition	Ready for operation	Yes
Operation condition	Slowing down	No
Operation condition	Product mode	No
Operation condition	CIP mode on	Yes
Process data	Feed flow actual	0.01 m³/h
Vibration data	Sensor 1 - Veff - Neck bearing	3.03 mm/s
Vibration data	Sensor 1 - Unbalance - Neck bearing	3.04 mm/s
Vibration data	Sensor 1 - Bearing envelope - Neck bearing	0.04 g
Vibration data	Sensor 2 - Veff - Frame	0.97 mm/s
Vibration data	Sensor 2 - Unbalance - Frame	0.87 mm/s

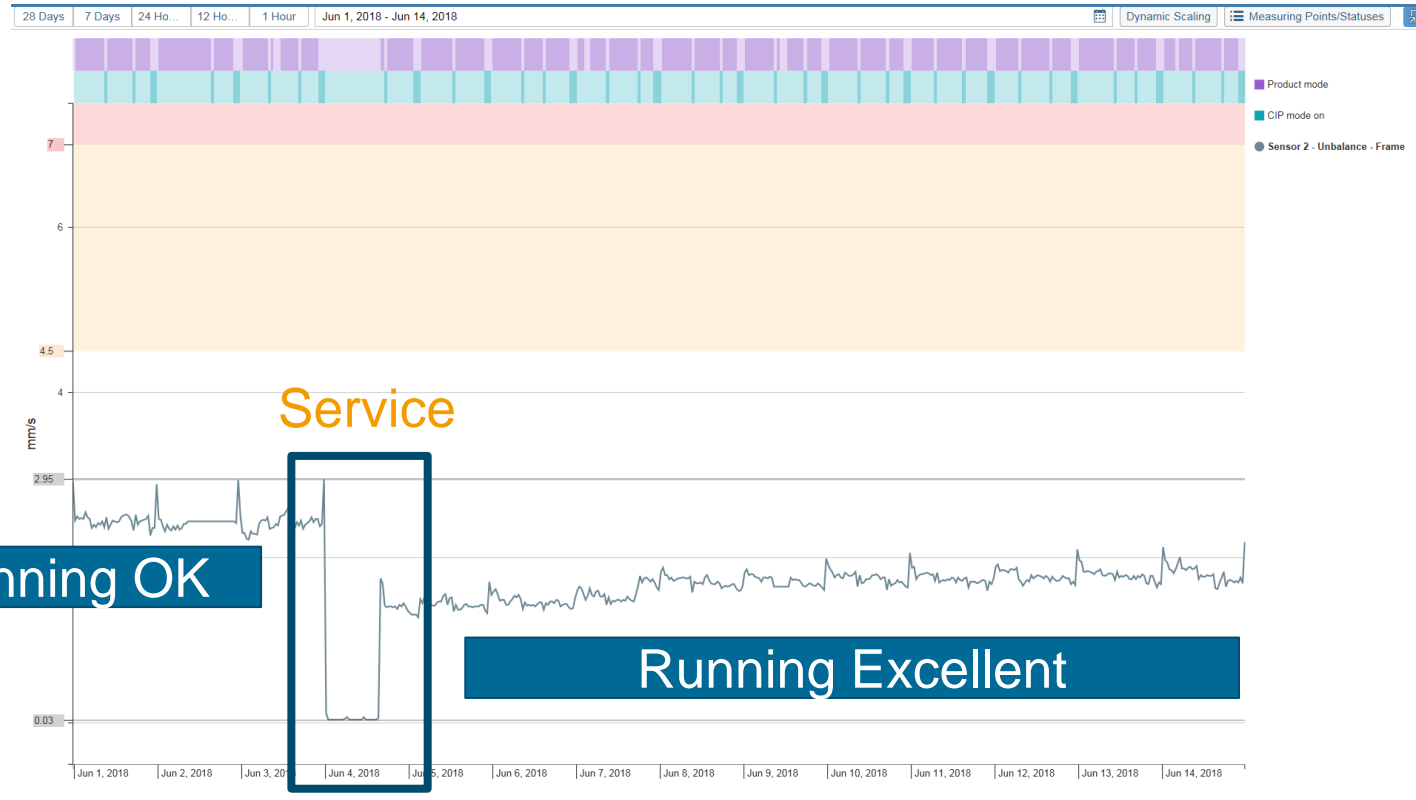


# Monitoring & Alerts – Alerts

Machine Condition Monitor										
Alert List										
Severity: <input type="text"/> Status: <input type="text"/>										
Hide Filter Bar Filters										
Severity	Alert	Source	Country	Customer	Machine Subtype	Measuring Point	Status	Processor	Ticket	Triggered
	Vibration alert		IT		Homogenizer	BY-2.0 Vibration sensor gear box - RMS				Sep 5, 2018, 12:59:53 PM >
	Vibration alert		NL		Homogenizer	BY-2.0 Vibration sensor gear box - Unbalance				Sep 4, 2018, 10:49:48 PM >
	Vibration alert		NL		Homogenizer	BY-2.0 Vibration sensor gear box - Unbalance				Sep 4, 2018, 9:54:48 PM >
	Vibration alert		IT		Homogenizer	BY-2.0 Vibration sensor gear box - RMS				Sep 4, 2018, 6:18:14 PM >
	Vibration alert		NL		Homogenizer	BY-2.0 Vibration sensor gear box - Unbalance				Aug 30, 2018, 5:04:37 PM >
	Vibration alert		NL		Homogenizer	BY-2.0 Vibration sensor gear box - Unbalance				Aug 30, 2018, 5:03:52 PM >
	Vibration alert		NL		Homogenizer	BY-2.0 Vibration sensor gear box - Unbalance				Aug 30, 2018, 5:03:28 PM >
	Vibration alert		NO		Separator					Aug 30, 2018, 11:35:44 AM >
	Vibration alert		DE		Separator	Sensor 4 - Veff - Motor				Aug 27, 2018, 12:15:39 AM >
	Vibration alert		DE		Separator	Sensor 4 - Veff - Motor				Aug 27, 2018, 12:15:29 AM >
	Vibration alert		DE		Separator	Sensor 4 - Bearing envelope - Motor				Jul 18, 2018, 3:01:51 PM >
	Vibration alert		NO		Separator					Jul 10, 2018, 8:49:32 AM >
	Vibration alert		DE			Sensor 1 - Veff - Frame liquid end				Jun 26, 2018, 4:51:11 PM >



# Monitoring: Example Proof of Effectiveness – for our Customers









# 3: Analyzing: Report for Customer

## Notification Status Update (Last 3 Months)

Dairy Customer	Service Information	Asset Health Indicator	Operational Indicators	Idle Indicators
Customer Machine Description GEA Centri 1 Machine Location Area B Contact Information Operations Manager	Last Service Date 24.11.2017 Next Service Date 24.05.2018 Weeks remaining 12 weeks remaining	 97 %	Operating Hours Total 1761 Number of Stops Total 1 Number of stops over Vibro 0	Idle Hours Total 10 Idle Hours - Ready 0 Idle Hours - Not Ready 10


Machine & Operation Data	CMI Bearing	CMI Vibration	CMI Bearing Motor	Additional Comment
Machine Number 1732-123 Machine Typ MSE Bowl Number 1732-123 Year of manufacture 2014 Hours of Operating 21142 Bowl Speed 4800	Good 33	Good 35	Good 24	The Equipment is in a good or very good condition. There is presently No evidence of impending threats to the Asset Health.
				
Trend & Tendency				
Trend = All CM values now stable since Last Service.				


GEA Contact Person: Technical Consultant  
Report Date + Time: 23.02.2018



# Analyzing: Report for Customer

## Notification Impending Failure (Last 3 Months)

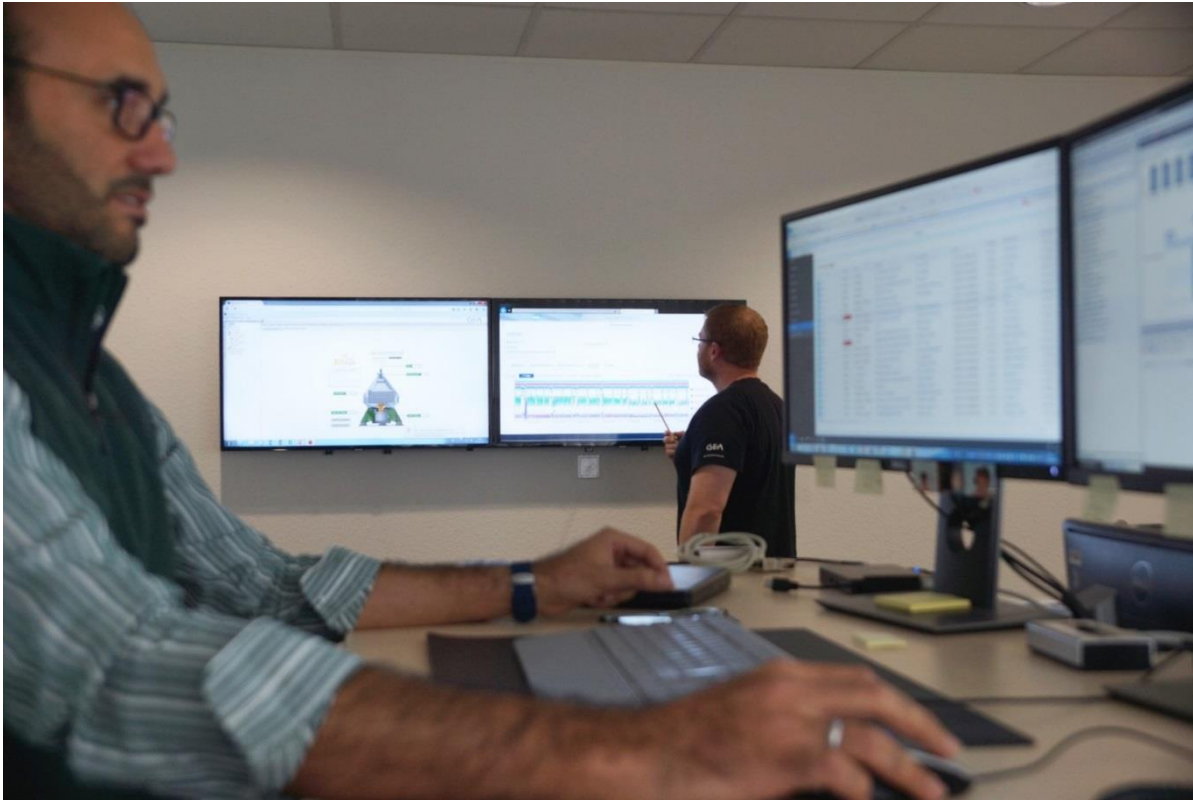
Dairy Customer	Service Information	Asset Health Indicator	Operational Indicators	Idle Indicators
Customer Machine Description Centri 1 Machine Location Area B Contact Information Operations Manager	Last Service Date 23.11.2018 Next Service Date 24.05.2019 Weeks remaining 12 weeks weeks remaining	 36 %	Operating Hours Total 1761 Number of Stops Total 1 Number of stops over Vibro 0	Idle Hours Total 10 Idle Hours - Ready 0 Idle Hours - Not Ready 10

Machine & Operation Data		CMI Bearing	CMI Vibration	CMI Bearing Motor	Additional Comment
Machine Number 1732-123 Machine Typ MSE Bowl Number 1732-123	Year of manufacture 2014 Hours of Operating 21142 Bowl Speed 4800	Acceptable  81	Not Acceptable  88	Good  25	<div>The Equipment is in a poor or very poor condition. There is presently evidence of an impending threat to the Asset Health. See CMI Indicators for details.</div>
<div><div></div><div>Trend &amp; Tendency</div><div>IMPENDING THREAT: As agreed, we will be on site tomorrow to evaluate the external paramters as they are affecting the Centrifuge.</div></div>					

GEA Contact Person: Technical Consultant  
Report Date + Time: 24.02.2019

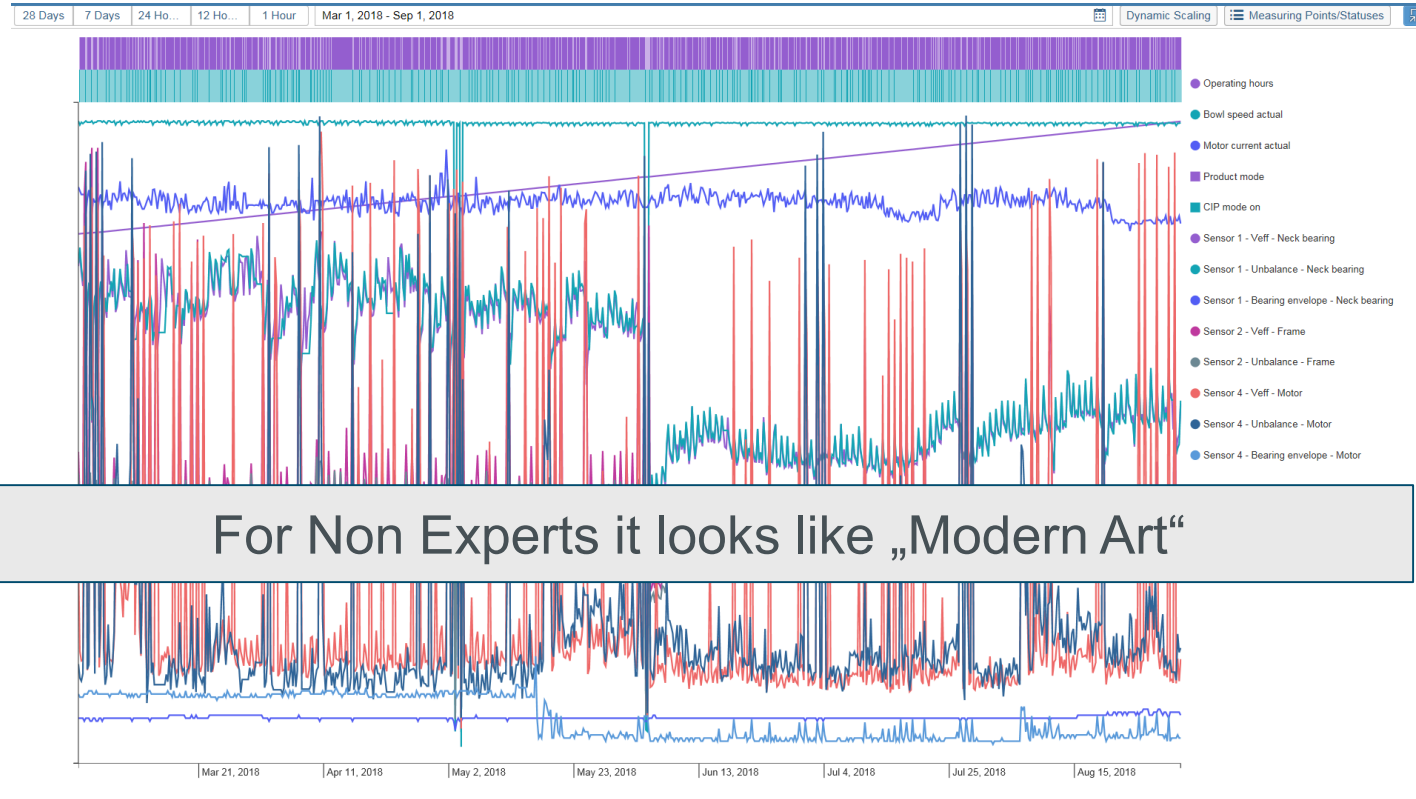








# Analyzing : Comprehensive Tool for GEA Experts





# Analysis & Alerts – Trend Data View





## 4: Optimizing : Customer on-site Consulting





# Optimizing: Support from GEA team of experts

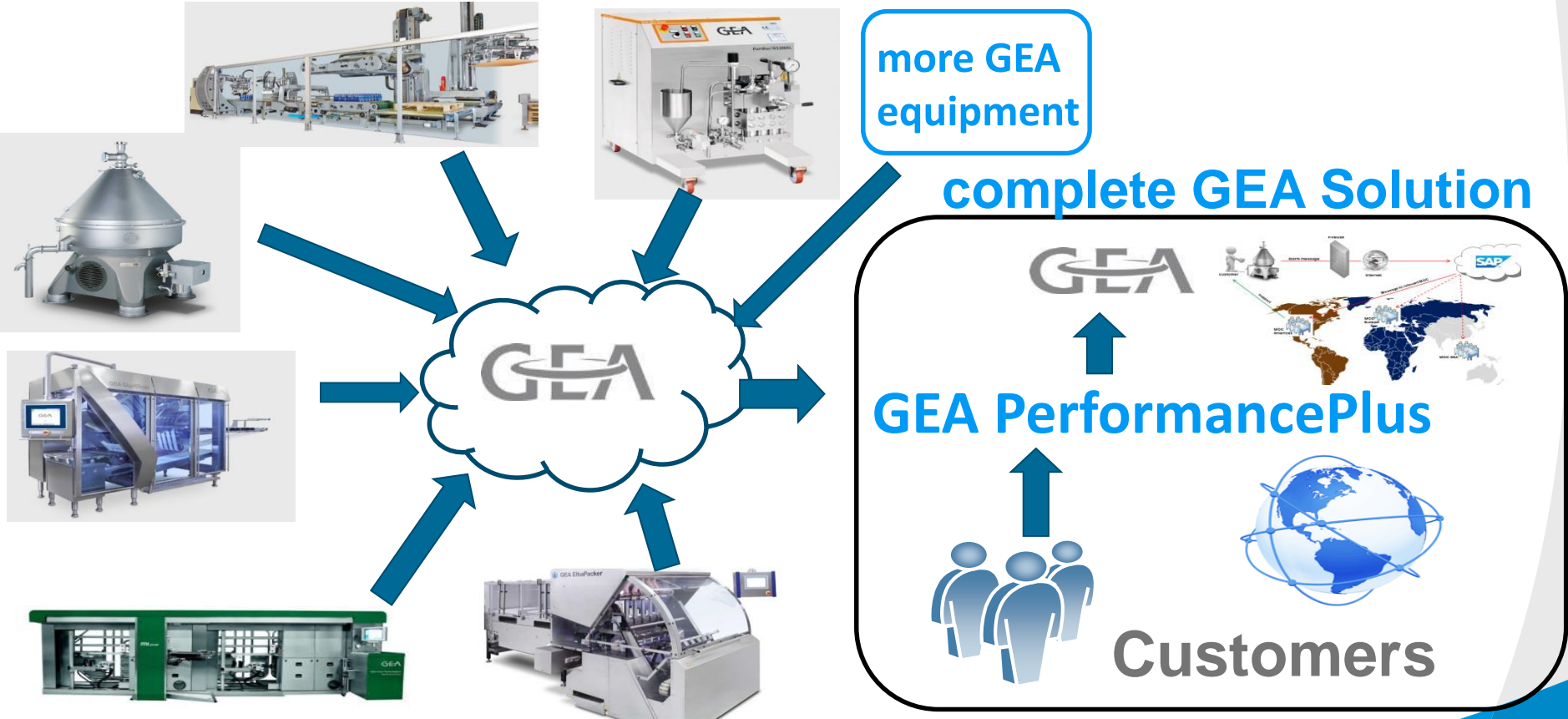




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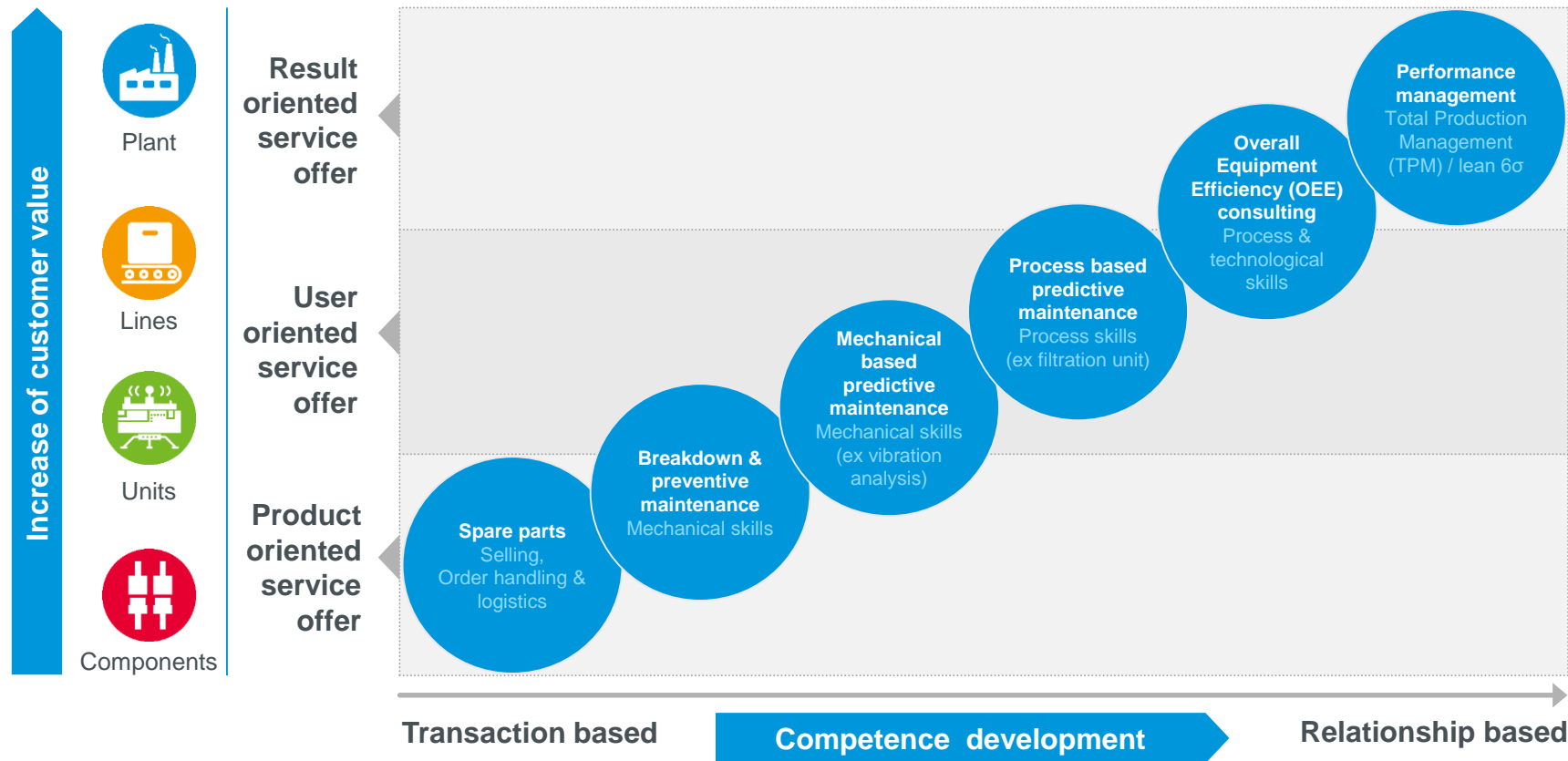


Next steps:  
more equipment → complete lines → complete plant





# Next steps: From Preventive to Performance Care





# And another possible step in future: Future customers...Future GEA...from Capex to Opex





Please contact :

Anselm Schoenmakers

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Service Product Management – E-SER - GEA Group

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