

Webinar

Technologies for Service Business Models

BearingPoint | Consulting Partner for Service Management

November 23rd, 2022

BearingPoint®

Your speaker today!



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Webinar-Reihe Innovationsforum Supply Chain: Digitale Lösungen erlebbar machen

In Kooperation mit der Deutschen Messe Technology Academy stellen wir Ihnen in unserer **Webinar-Reihe "Innovationsforum Supply Chain: digitale Lösungen erlebbar machen"** innovative Lösungen entlang der Wertschöpfungskette vor, die sich schnell und nachhaltig umsetzen lassen.

Teil	Titel	Termin
1	Virtual Reality als Beschleuniger für die Prozesstransformation	23.03.2022 / 9:00-10:00
2	Bestand optimieren mit künstlicher Intelligenz	06.04.2022 / 9:00-10:00
3	Digitale Instandhaltung - neue Potenziale verwirklichen	27.04.2022 / 9:00-10:00
4	Moderne Instandhaltung mit Fokus auf die Auftragsabwicklung via SAP FIORI Apps	12.10.2022 / 9:00-10:00
5	Zeitgemäße Technologien zur Abbildung von Service Geschäftsmodellen	23.11.2022 / 9:00-10:00

- Die Webinare werden aufgezeichnet, Ihre Fragen während des Vortrags werden daher ebenfalls aufgezeichnet.
- Die Fragerunde nach dem Vortrag wird nicht aufgezeichnet.
- Alle Teilnehmenden sind auf «Stumm», bitte selbstständig die Stummschaltung aufheben bei Wortmeldungen.
- Bei Fragen während des Vortrags, bitte die virtuelle Hand heben oder direkt in die Chat Funktion schreiben.
- Die Präsentation wird auf Deutsch gehalten, die Folien sind in Englisch.
- Auf der Veranstaltungsw Webseite werden die Präsentationen und die Aufzeichnung zum Download zur Verfügung gestellt.

BearingPoint at a glance

€757m
Total revenue CY2020

17
New IP products

12.346
Global alliance headcount

78
Countries we work in

183
BearingPoint Partner

41
BearingPoint offices

2009
Foundation year as BearingPoint
European partnership

4.639
BearingPoint people

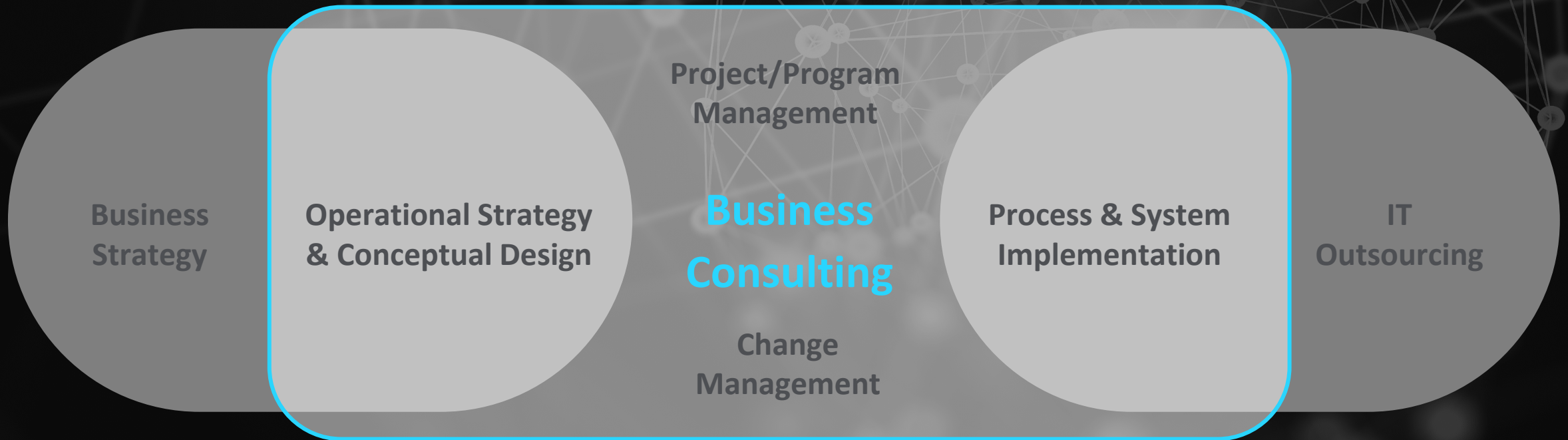


We deliver management and technology consulting with a difference. We drive change in our clients' businesses by creating customized solutions on a personal basis

We develop **strategies und processes** for sustainable and measurable added values.

Always focusing on customers.
We develop individual solutions - always considering the customer's requirements -

... and implement **the right technology** to target achievements and results.







BearingPoint NEW Consulting Approach

NEW Segments

-  AIM
-  Banking & Capital Markets
-  Chemicals, Life Sciences & Resources
-  Communication, Media & Entertainment
-  Consumer Goods & Retail
-  Government & Public Service
-  Insurance
-  Utilities, Postal & Transportation

Nachhaltigkeit

-  Sustainability Excellence
-  Agile & New Ways of Working
-  Risk & Compliance
-  People, Change & Program Mgt.

Effizienz

-  Artificial Intelligence Data & Analytics
-  S/4 Transformation Framework
-  Finance Strategy & Excellence
-  Operational & Process Excellence
-  Sourcing, Procurement & Supply Chain

Wachstum

-  Marketing & Sales Excellence
-  Customer Experience & Service Transformation
-  Predictive Forecasting & Integrated Planning
-  NextGen Value Chain Transformation

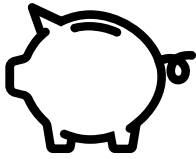
NEW Consulting

NEW Products

-  Digital Solution Factory
-  ETM.next
-  SWARM
-  Data Quality Navigator
-  Emissions Calculator
-  Platform & Software Services
-  DemandSens

Industry trends and stress in after sales service

After sales is subject to high pressure to change



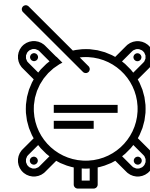
Need for efficiency

Increased cost pressure and efficiency targets in after sales



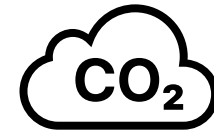
Employee shortage

Management of skilled workers and attractiveness of the workplace for young employees



New business

Development of new business models and position of after sales



CO₂ reduction

Sustainability trend and impact on field service

Maturity of service business models vary in practice

Service as a key success factor for *as-a-service* business models

Planned maintenance and full-service contracts

Maintenance contract with machines sales (e.g., SLA with repair guarantee 24/7) up to full-service / operator model

Servitization of production factors

Service with performance specifications (performance contracting), machine contracting with labor-dependent usage fees (power-by-the-hour), zero-downtime contracts

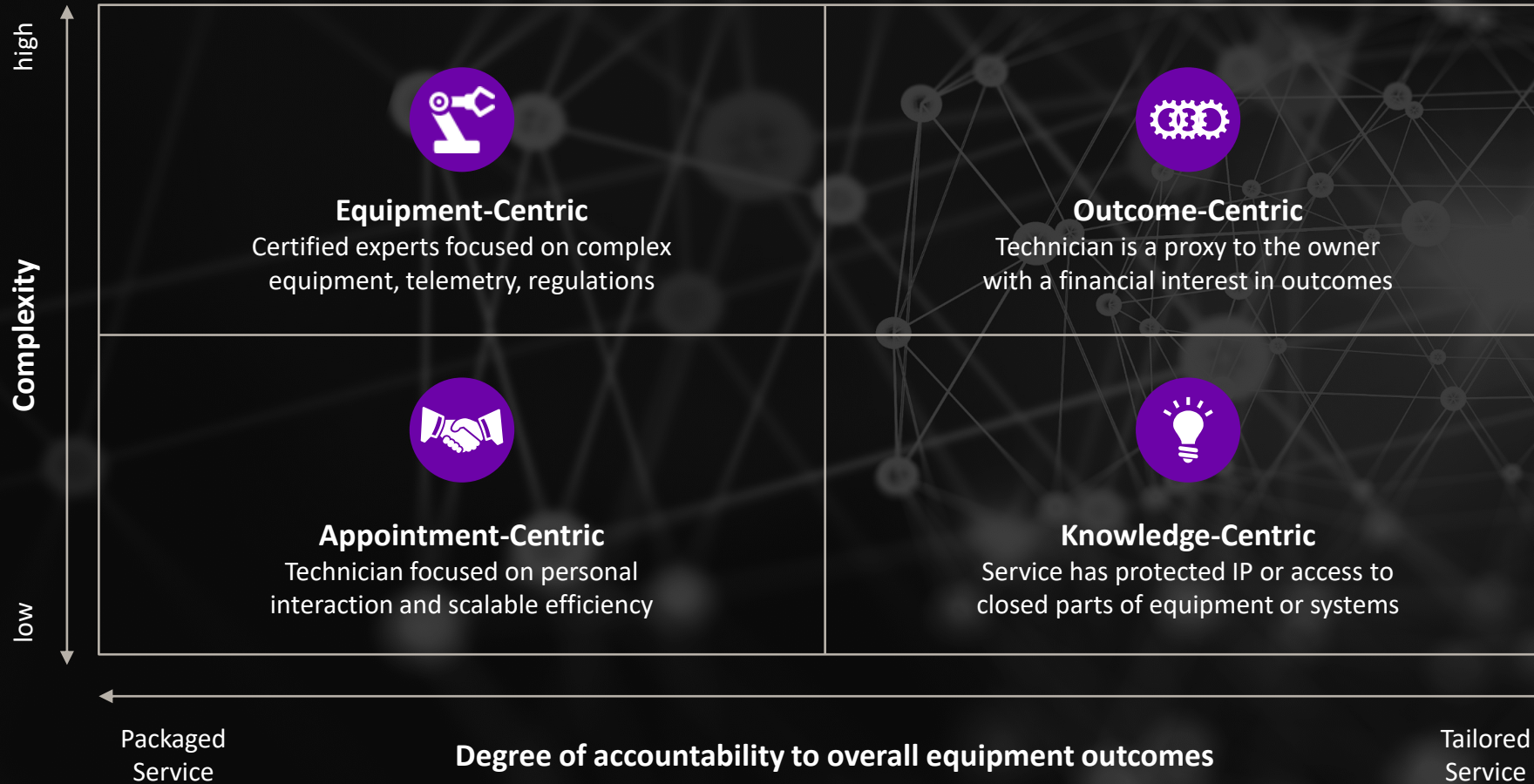
Individual and project contracting

Break and fix, repair workshop, specialist services to customers as an equipment manufacturer



The business model determines the focus of digitization initiatives and the use of appropriate technologies.

Overview of business models



84%

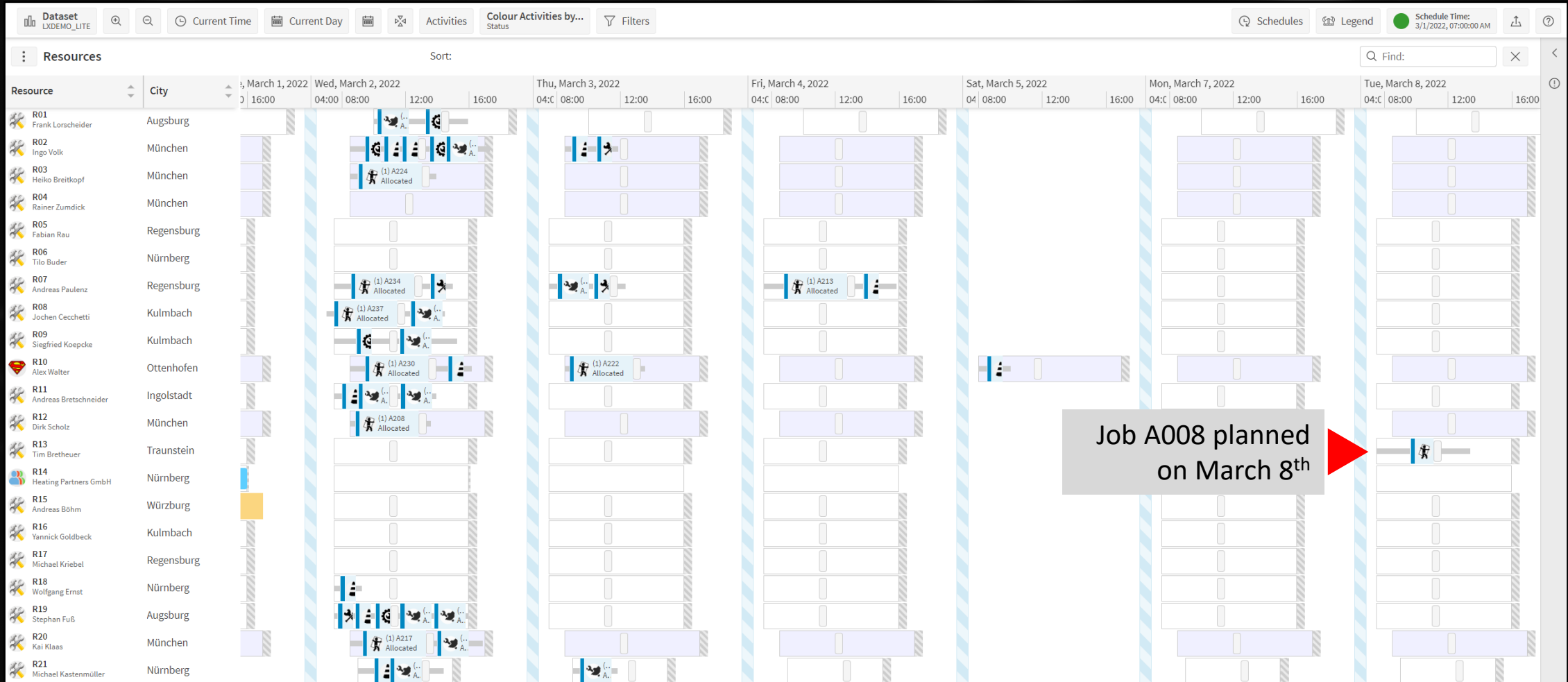
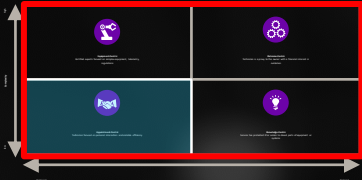
of firms state outcome-based business models are a high or critical priority

59%

Strongly believe that revenue from servitization and outcome-based business models will exceed standalone hardware / equipment sales in the next 5 years

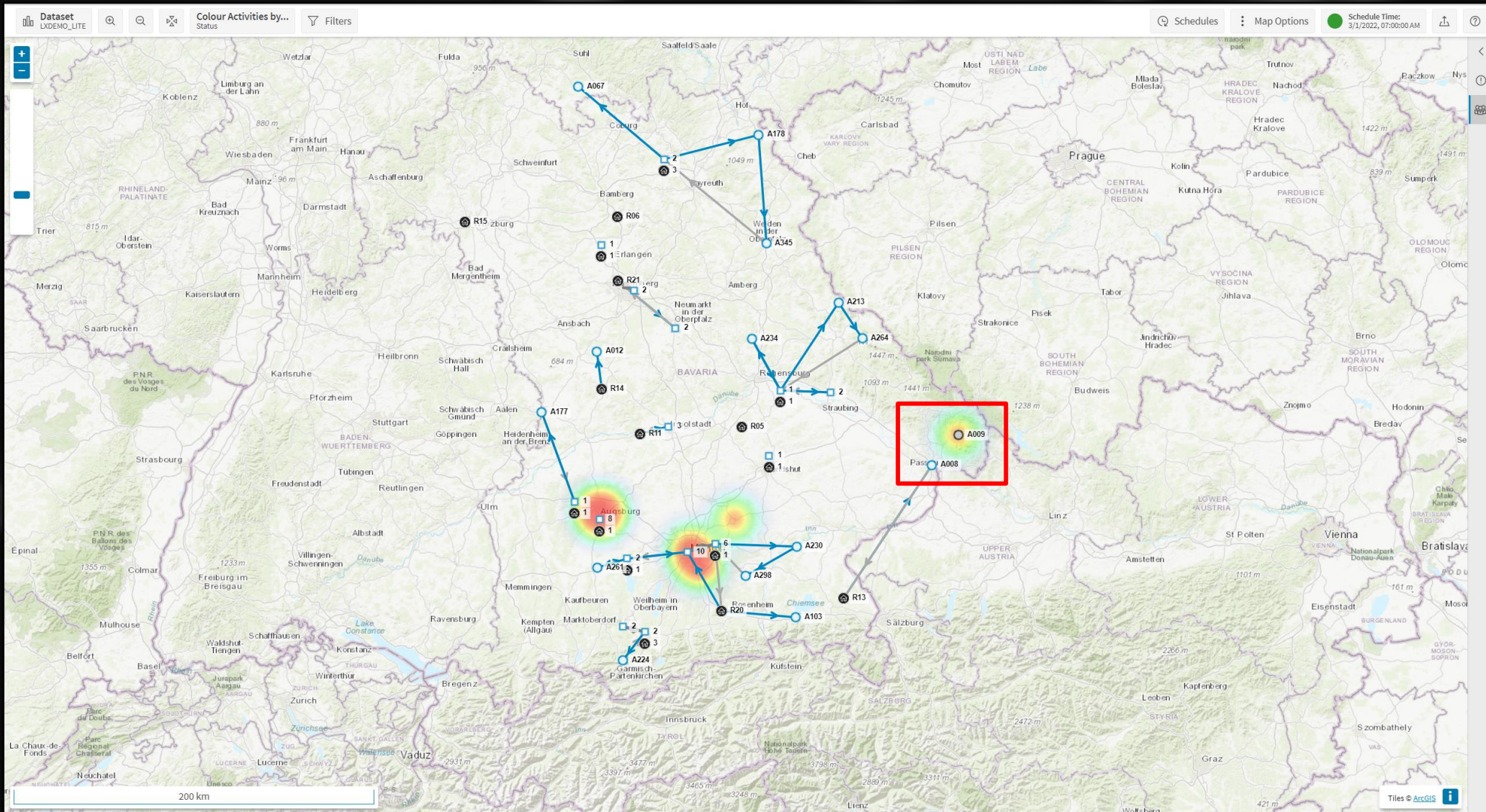
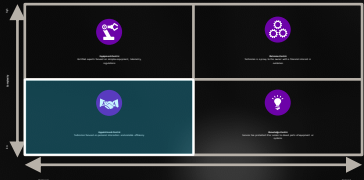
Proposed field service job for optimized scheduling

Planning proposal from the maintenance planning



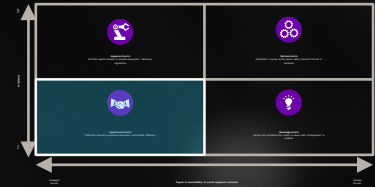
Job A008 planned on March 8th

Resulting in a current schedule: Resource13 travels to A008, A009 not yet booked



Customer portal appointment booking scenario

... Options for additional EBIT or to nudge the customer behavior



PSO suggest "green slots" that minimize travel ...

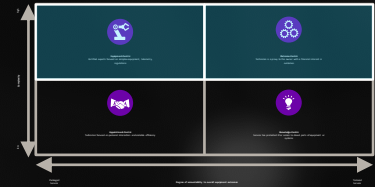
Score	Offer Start	Offer End	Action
100	2022-03-08 10:00:00	2022-03-08 11:00:00	Book
100	2022-03-08 11:00:00	2022-03-08 12:00:00	Book
75	2022-03-04 09:30:00	2022-03-04 10:30:00	Book
75	2022-03-04 11:00:00	2022-03-04 12:00:00	Book
71	2022-03-07 10:00:00	2022-03-07 11:00:00	Book
71	2022-03-07 11:00:00	2022-03-07 12:00:00	Book
69	2022-03-09 10:00:00	2022-03-09 11:00:00	Book
69	2022-03-09 11:00:00	2022-03-09 12:00:00	Book

... but can also offer the earliest available slot

Score	Offer Start	Offer End	Action
75	2022-03-04 09:30:00	2022-03-04 10:30:00	Book
75	2022-03-04 11:00:00	2022-03-04 12:00:00	Book
71	2022-03-07 10:00:00	2022-03-07 11:00:00	Book
71	2022-03-07 11:00:00	2022-03-07 12:00:00	Book
100	2022-03-08 10:00:00	2022-03-08 11:00:00	Book
100	2022-03-08 11:00:00	2022-03-08 12:00:00	Book
69	2022-03-09 10:00:00	2022-03-09 11:00:00	Book
69	2022-03-09 11:00:00	2022-03-09 12:00:00	Book

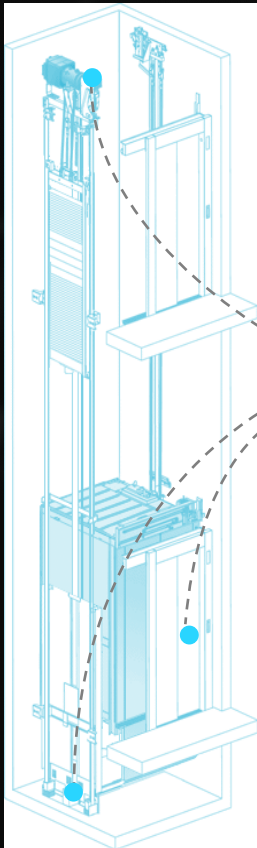
To generate added value for customers an appropriate orchestration of exiting technologies is key.

Customer Example of technology usage to leverage equipment-centric and outcome-based business models



Detect & Interact

Collect physical machine data & enable real-time interaction



Detect



Controller



Modular Sensor-Kit



TeleAlarm

Interact



Camera



Video

Connect

Compute & transmit relevant data over-the-air



Get Insights

Combine profound industrial expertise with advanced analytics

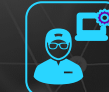


Customer Benefits

Realize outcomes for customers



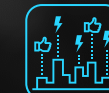
Remote Monitoring



Predictive Maintenance



Product Design Improvements

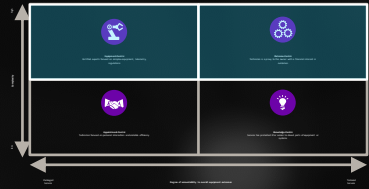


New Digital Offerings, e.g. Smart Building Solutions

BearingPoints IIoT Starter Package allows to take rapidly your machines to the cloud!

A service offering to start quickly with IoT

- Your entry point to *Industrial Internet of Things (IIoT)*-based Condition Monitoring
- A packaged solution comprising the following components:
 - Assisting with the Installation support for included IIoT gateway, hub and sensors
 - Activation of cloud components, including a 3 months Microsoft Azure subscription
 - Automatic downtime detection algorithm
 - Sensor data visualization and condition monitoring in cloud dashboard
 - Consulting service and use case analysis



BearingPoint.

BearingPoint Industrial Internet of Things Starter Package

BearingPoint will quick-launch your Industrial Internet of Things (IIoT) strategy. We transform sensor signals & swarm intelligence into business value.

With the Industrial Internet of Things Starter Package, BearingPoint offers a quick-launch solution to connect machines to the cloud and visualize their condition in a central cloud dashboard. By combining sensor data with context information provisioned by the swarm intelligence of your workforce, BearingPoint helps you unlock the real potential of IIoT.

Hardware	Cloud
<ul style="list-style-type: none">• 1x CloudKit Box• 1x IOT Link Master• 1x IIoT Vibration Sensor• 1x IIoT Temperature & Humidity Sensor	<ul style="list-style-type: none">• Microsoft Azure Subscription (3 months)• Microsoft Azure IoT Central• CloudKit Device Management Subscription (3 months)
Service	
<ul style="list-style-type: none">• Ready-to-use hardware installation and set up• Microsoft Azure cloud integration and configuration• Ready-to-use Microsoft Azure IoT Central Dashboard• Ready-to-use IIoT swarm intelligence forms• Workshops to define your individual IIoT roadmap	

9,950 Euro
(excl. VAT)

Your Benefits

- **Easy-to-use.** Bring your project up to speed with rapid hardware installation, cloud integration and visualization
- **Sensor monitoring.** Live visualization of the machine vibrations – implemented in just hours
- **Condition monitoring.** Real-time tracking of your production equipment – automatically identify machine downtime
- **IIoT Swarm.** Leverage the swarm intelligence of your workforce together with sensor data and artificial intelligence
- **Expert consulting.** Benefit from BearingPoint's holistic cross-industry consulting experience

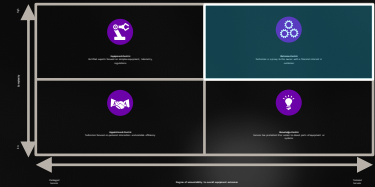
Our experts are ready to support you with your IIoT journey. Please contact our IIoT experts today.

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Start simple. Stay flexible. Scale quickly.

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Flexible billing solution for the preparation of SAP SD as an “invoicing engine”




SAP Manage Contracts Equipment and Tools Management

Campus Brandenburg Park Contract 10142

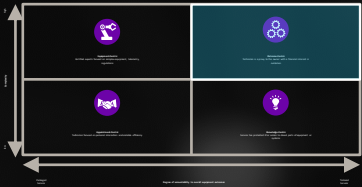
Download Edit

Contract Items (6) Standard

Start Job End Job Insert Request Revert Request Provide Return

Resource	Planned RU	Ordered	Open	Returned	Status	H...	From	To	Billing Type	Billed Until	Number of Items	Billing D...
101410 - Matterport Pro2	101410 - Matterport Pro2	1,00 PC	0,00 PC		return (picked)		11.05.2022	30.07.2036	time based		1	
700009 - Excavator Operator	700009 - Excavator Operator	100,00 %	0,00 %		started		11.05.2022	31.07.2036	performance based		4	
222222 - Cement	222222 - Cement	50,00 M3	0,00 M3		final billed		11.05.2022	24.07.2036	sales (one-time)		1	
600002 - Bosch Universal Impact ...	600002 - Bosch Universal Impact ...	1,00 PC	0,00 PC		provide (received)		11.05.2022	31.07.2036	time based		1	
New Construction Phase												
102462 - Loading Shovel	102462 - Loading Shovel	1,00 PC	0,00 PC	1,00 PC	return (received)		27.09.2022	27.10.2022	time based			

Deep dive flexible surcharges and discounts in combination with performance-based options



SAP Manage Contracts - Equipment and Tools Management

Contract Item Billing // Edit

Description: 11.05.2022 To: 31.07.2036 Billed Until: 07.07.2022 contractItemStatus: Fixed Price: No Currency: Euro Price Date: 18.11.2022 Calculate Price

Billing Information: Billing Items, Billing Runs, Logbook

Catalog: - Hours per month: 160 Billing Type: performance based Pricing procedure: performance based Days per month: Calculation Method: PB (work days)

Billing Items

Records Standard

Description	Bill Price	Bill Quantity	Condition Quant...	Condition Price	Type of Billing	Calculation Method	Counter	Default Quantity
Performance based special price	3.00 EUR	1,00 H	1,00 H	3.00 EUR	not billed			0,00 H
Special price discount	3.00 EUR	1,00 H	100,00 %		not billed			%
Special price total	3.00 EUR	1,00 H			performance based		working hours	6,00 H
Performance Price - moved cubic meter	123.00 EUR	1,00 M3	1,00 M3	123.00 EUR	performance based		moved cubic meter	1,00 M3

Billing Runs

Records Standard

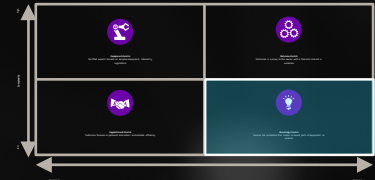
Bill Date	Business Confirmation	Billing Amount	Cancelled	Changed By
07.07.2022	Yes	702.00 EUR	No	alexandru.cojocaru@bearingpoint.com

Pricing procedure: performance based Pricing Date: 22.11.2022

Step	Status	Condition	Description	Base Bill Condition	Calculation	Next Step on Found	Next Step on Not Found	Base Counter
> 5	●	CNTR	Counter					
> 10	●	DIPS	D&I performance based special price					
> 11	●	DID1	D&I special price discount	DIPS	Percent (BaseValue - Discount)			
15	●	DIST	D&I special price total	DID1	Total	60		CNTR
> 20	●	DICP	D&I catalog price	DICP				
> 30	●	CPPC	Catalog Producer Price Index	DICP	Percent (DiscountValue)			
> 40	●	DIDS	D&I discount	CPPC	Percent (BaseValue - Discount)			
> 50	●	DIRP	D&I rent price	DIDS	Total			CNTR
> 60	●	RPPS	Repair performance based special price					
> 61	●	RPD1	Repair special price discount	RPPS	Percent (BaseValue - Discount)			
65	●	RPST	Repair special price total	RPD1	Total	200		CNTR
> 70	●	RPCP	Repair catalog price					
> 75	●	CPPR	Catalog Producer Price Index	RPCP	Percent (DiscountValue)			
> 90	●	RPDS	Repair discount	CPPR	Percent (BaseValue - Discount)			
100	●	RPRP	Repair rent price	RPDS	Total			CNTR
> 110	●	PC01	Performance Price - kilometer					
> 120	●	PC02	Performance Price - mileage					
> 130	●	PC03	Performance Price - moved cubic meter					
> 140	●	PC06	Performance Price - fuel					
> 150	●	PC04	Performance Price - moved tons					
> 160	●	PC05	Performance Price - lubricant					
> 165	●	ARWE	Arbeitsweg					
> 200	●	INSR	Insurance				400	

Utilizing the workforce to gain Insights, enabling Swarm Intelligence

Unlock the potential of distributed information at your Fingertip



CHALLENGE

- Gathering data is difficult, especially when unstructured
- Forms usually lack intelligent prefill and automation
- External employees don't have access to company systems
- Flexible solutions lack seamless integration with your IT enterprise applications

OUR SOLUTION

- intelligent and fully customizable forms
- templates with automations built on your business needs
- communicating to your Microsoft, SAP, Salesforce and IFS systems

YOUR BENEFITS

- ✓ Collect relevant data, scheduled or ad-hoc
- ✓ Reduce time using intelligent automations
- ✓ Combine IoT and human entered data for best insights
- ✓ Improve data quality by smart validations
- ✓ High data accuracy with advanced components

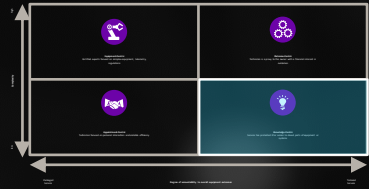
multi-conditional fields

the right input types for your needs

custom and smart validations

Utilizing the workforce to gain insights and mobilize

Unlock the potential of distributed information with tailored input types



SAP Maintenance Order 410001074
Forklift - Checks & Measurements DA/01

Operations

Operation	Suboperation	Control Key	Work Center
Visual Check	0010	Plant maintenance - internal (PM01)	SWARM EXECUTOR INTERNAL 1 (SWRMINT1)
Function Test	0010	PD resource plng "internal processing" (PD01)	SWARM EXECUTOR INTERNAL 1 (SWRMINT1)
Check/Evaluate Error Logs	0020	PD resource plng "internal processing" (PD01)	SWARM EXECUTOR INTERNAL 1 (SWRMINT1)
Check/Refill Fluid Level	0030	PD resource plng "internal processing" (PD01)	SWARM EXECUTOR INTERNAL 1 (SWRMINT1)
Renew Sealing	0040	PD resource plng "internal processing" (PD01)	SWARM EXECUTOR INTERNAL 1 (SWRMINT1)
Check Meters And Provide Values	0050	PD resource plng "internal processing" (PD01)	SWARM EXECUTOR INTERNAL 1 (SWRMINT1)
	0060	PD resource plng "internal processing" (PD01)	SWARM EXECUTOR INTERNAL 1 (SWRMINT1)

Inspection Checklist

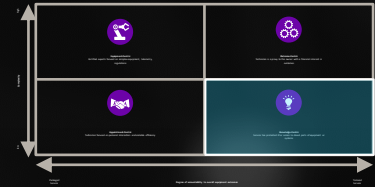
Sop	Inspection list	Checked	Check result	Additional details
0010	Visual Check	Check Done	OK	Additional details
0020	Function Test	Check Done	OK	Additional details
0030	Check/Evaluate Error Logs	Check Done	Not OK	Error E14
0040	Check/Refill Fluid Level	Check Done	Not OK	Not possible
0050	Renew Sealing	Check Done	Not OK	Additional details
0060	Check Meters And Provide Values	Check Done	Not OK	Additional details

Counter reading: 45

Temperature: 0 to 100 scale with slider at 55

to be connected to a field in the object

Perform equipment centric activities fast and easy with Swarm



2 The **current location, date and time** are filled automatically for confirming physical presence near the equipment. Basic information about the equipment are already provided.



1 QR codes on machinery open ad-hoc inspection forms that are **prefilled with equipment information**. The code can be placed anywhere inside or outside the equipment for better use.

3 After Submit, the data is **pushed to core systems** to be evaluated and acted upon.

Vehicle Handover

Physical presence confirmation

Current location
China, Deposit 23

Current date
02.03.2022

Current time
4:57 PM

Vehicle information

Vehicle number
0865894400

Are you in the possession of your driver's license?
 Yes No

Mark the issues on the equipment



The selection of the appropriate technology depends heavily on the strategic choice and the underlying business models.

Selected technologies in service and their impact on revenue, efficiency and backend IT.

Revenue-driven

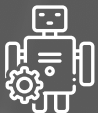


Additive Manufacturing



Digital Twin

Efficiency-driven



Robotic Process Automation (RPA)



Augmented & Virtual Reality

Core Backend



Harmonization & Standardization



Micro Service Architecture

Cloud and micro services

Business capabilities close to the user or machine, which require innovation

Enterprise core

Harmonized processes and strong process governance

Standardized processes to benefit from ongoing innovation

Webinar-Reihe Innovationsforum Supply Chain: digitale Lösungen erlebbar machen

In Kooperation mit der Deutschen Messe Technology Academy stellen wir Ihnen in unserer **Webinar-Reihe "Innovationsforum Supply Chain: digitale Lösungen erlebbar machen"** innovative Lösungen entlang der Wertschöpfungskette vor, die sich schnell und nachhaltig umsetzen lassen.

Virtual Reality als Beschleuniger für die Prozesstransformation

Aufzeichnung und Präsentation:



Bestand optimieren mit künstlicher Intelligenz

Aufzeichnung und Präsentation:



Digitale Instandhaltung – neue Potenziale verwirklichen

Aufzeichnung und Präsentation:



Moderne Instandhaltung mit Fokus auf die Auftragsabwicklung via SAP FIORI Apps

Aufzeichnung und Präsentation:



