
SENIOR LEAN DIGITAL EXPERT LEARNING PROGRAM

– Introduction to the program and registration process –

Information package

Düsseldorf, March 2023

Senior Lean Digital Expert Learning Program at a glance

Target group & requirements



- Department heads and group leaders from operations, plant logistics, maintenance or production planning, innovative Industrial Engineers or process designers, Drivers of Lean and Digital Innovations, upcoming Digital Experts and Smart Factory Designers
- 3-5 y's operations, engineering, SCM experience
- Lean Know-how at Lean Expert Level
- Project Management experience: own projects already led with KPIs, Time, Content, Budget

Concept

- Lean Digital Expert competence with Lean and Digitalization expertise to understand and transform today's Lean Smart Factory requirements
- 18 training days, up to 100 hours
- Group coaching sessions tailored to training modules
- Accompanying implementation of individual & certifiable practical projects in your plant
- Included: personal coaching by LMX Expert Mentors for Lean, Digitalization, Change
- Gemba live sessions broadcasted from Learning Factory and Gigaset plant.
- Online tests to round off the knowledge
- Certified as a Senior Lean Digital Expert by Ruhr University of Bochum and LMX
- Possibility to be certified Scrum Master
- Duration approx. 8 months total

Conditions



- 10 - 15 Participants
- Virtual training with real Gemba live sessions from a Factory environment, remote group coaching
- English / German
- Certification as a Senior Lean Digital Expert from Ruhr University Bochum
- Included: Scrum Training sequences and PSM I Assessment-Voucher for Scrum Master-Title
- 14.900 € / participant – expected project savings at plant of 50k€ in 1st and >250 k€ after 3rd year

Highlights

- Interactive, multifaceted online training with deep dives on Lean Value Streams and Smart Factory system applications (hardware & software)
- Live features broadcasted from Learning Factory & LMX best practice partner
- Better personal time management through sequenced training modules, no travel expenses
- Individual 1:1 coaching sessions in 8-month project phase assure savings of 50 k€ already within 1st year
- Analysis and Design of Future Smart Factory Value Stream Systems – Focus Lean and Digital
- The targeted selection of media used: digital whiteboard, quiz tools, online surveys and MS Teams puts the focus on the participant and turns theory into live experiences.
- Leading your agile project as a Scrum Master

Scope (Proportionate focal points)



Lean

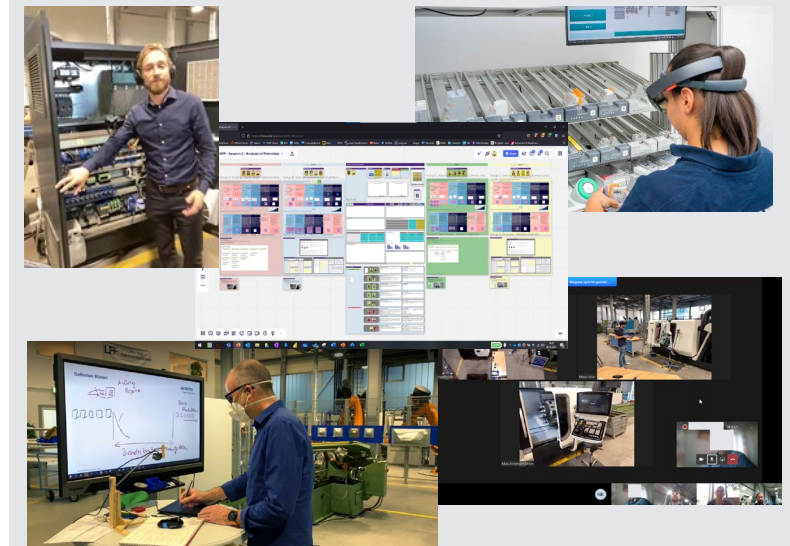


Agile



Digital

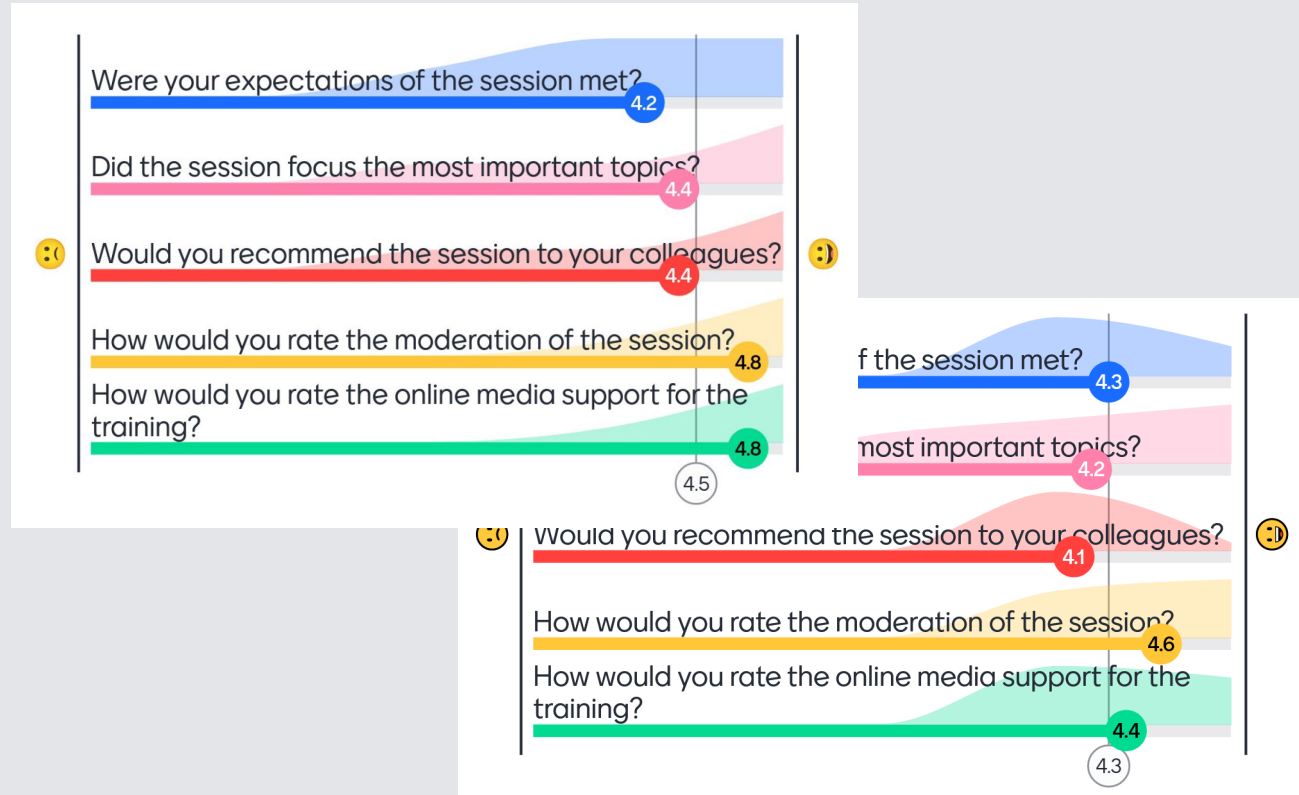
Impressions



Feedback from the previous run



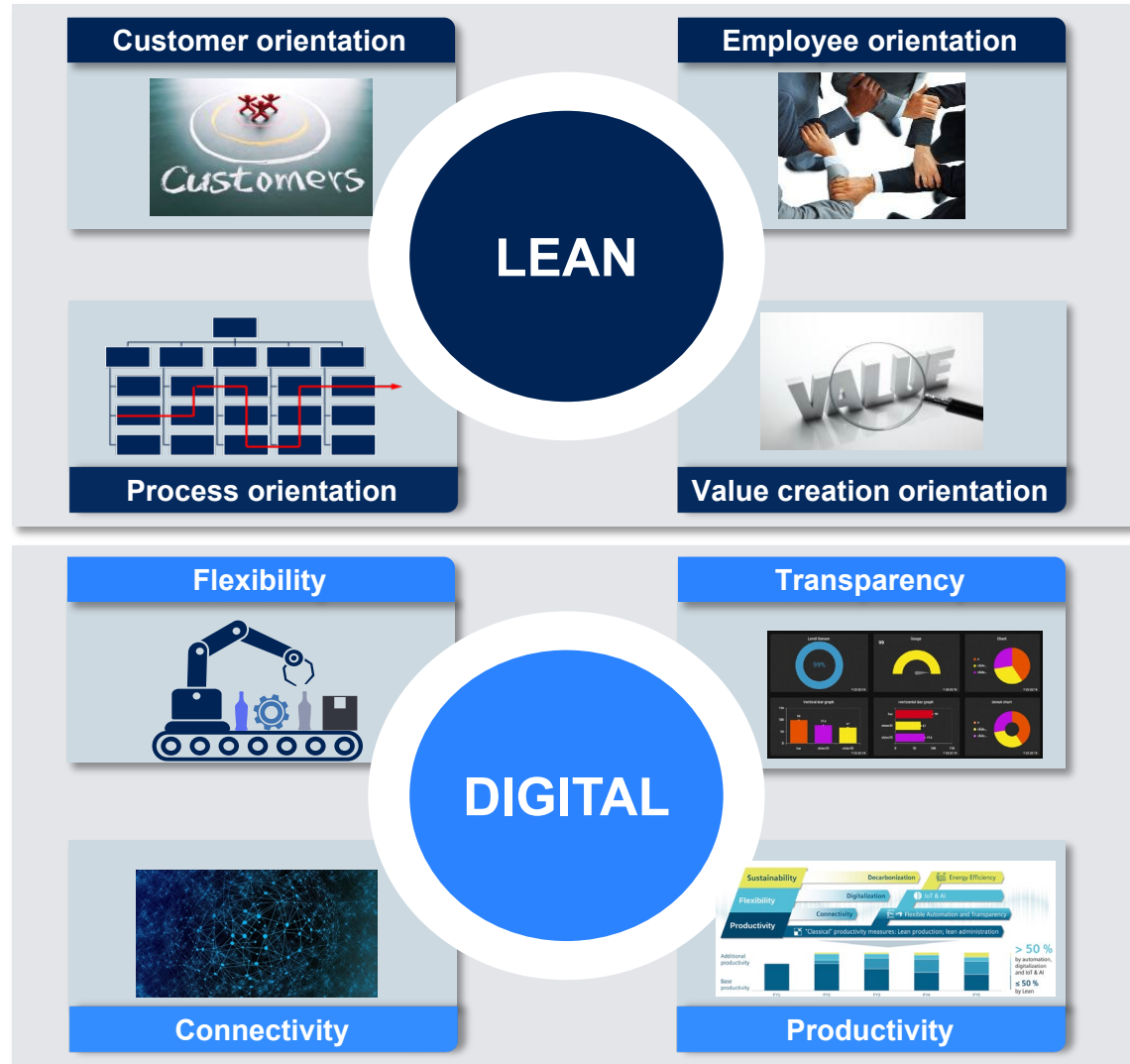
Beside personal Coaching and Project Guidance, on a general high level of commitment in all fields, upcoming **Senior Lean Digital Expert** participants appreciate media delivery and installed trainers of program



Rate: 1 = 😞 to 5 = 😊

Why Lean - why Digital – why lean digitalization?

Lean Thinking and using digital opportunities were today's enablers of growth and success



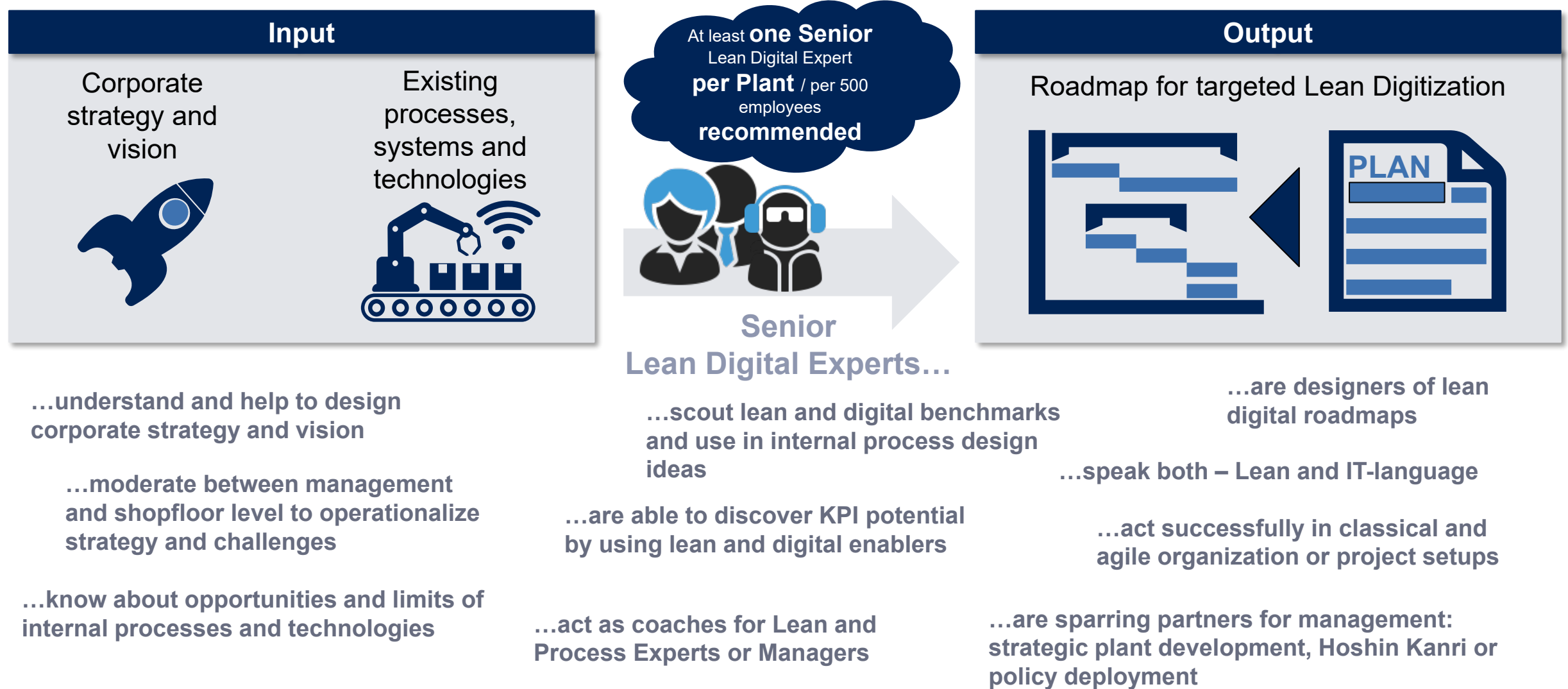
Achieving sustainable growth

by putting customers first, seizing opportunities and exploiting our capabilities / capacity

Setting the bar in the digital transformation market

by leveraging Lean and Digital Know-how

Competences of Senior Lean Experts have been enriched: from Senior Lean Expert to Senior Lean Digital Expert – both skills built a platform for successful plant transformation



Main target group for Senior Lean Digital Experts are process trendsetters and sparring partners of management: all innovators, who create value in your future smart factories

Participants typically come from the following functions...

- Department heads and group leaders from operations, plant logistics, maintenance, shopfloor IT or production planning
- Innovative Industrial Engineers or process designers
- Lean Experts and Drivers of CIP in Business Excellence processes or operative functions
- Upcoming Digital Experts and Smart Factory Designers



...and all Lean or Digital
Pioneers, who want to
enrich their knowledge of
both worlds



Requirements: Participants should have the following skills

- 2-3 years manufacturing or SCM processes experience
- Lean Know-how at Lean Expert Level
- Experiences in project management
- Open mindset for Digitalization and IT related topics

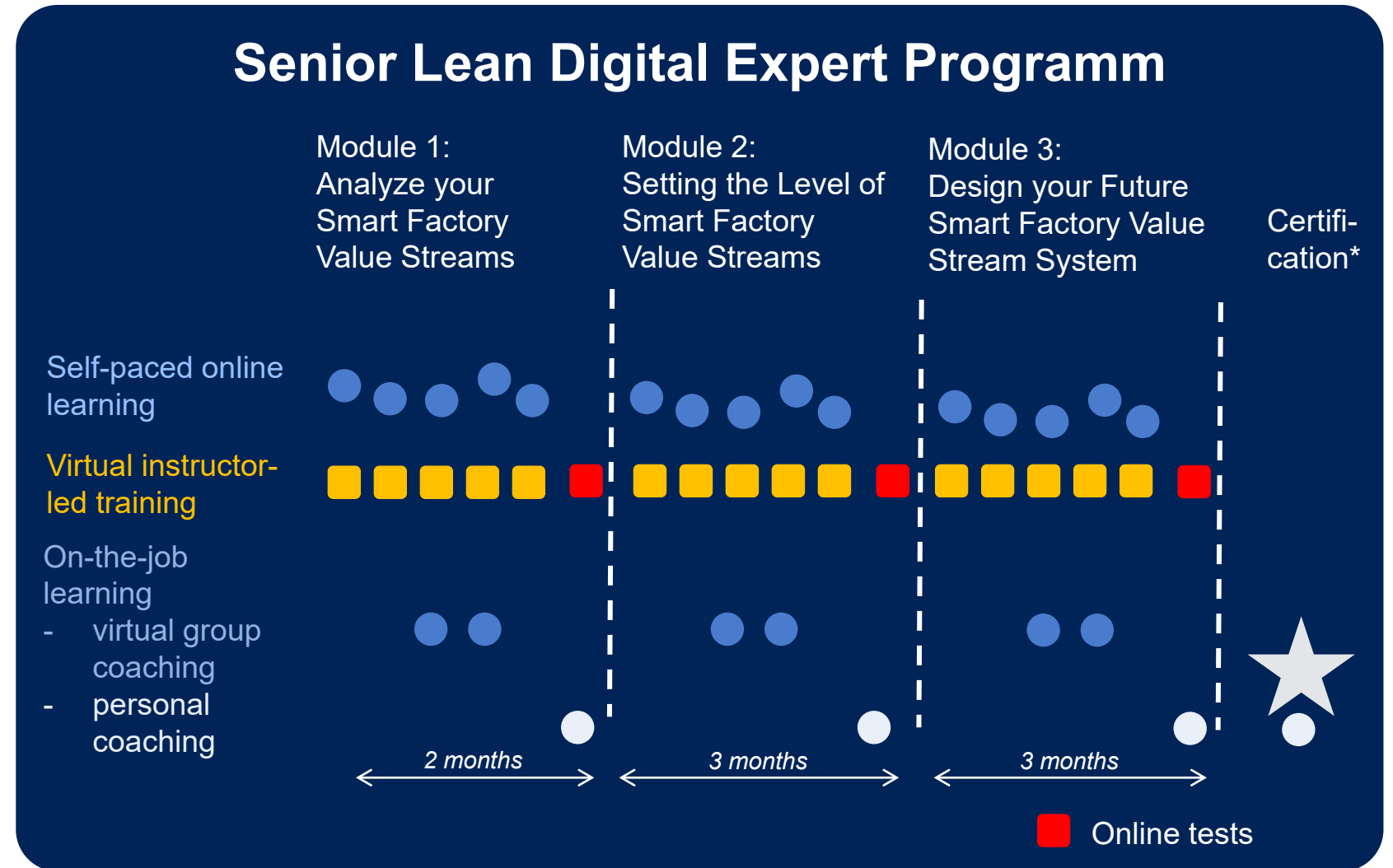


Theory, personal coaching and project work with more than at least 50k€ savings at plant – participants are led to a certification as Senior Lean Digital Expert and as Scrum Master

Included:

- Up to 100 hrs of training and group coaching
- 16 hrs of individual coaching per participant until certification
- **Project savings expectation of at least 50 k€** within first implementation year **and >250 k€** after 3rd year
- **Certification** as a Senior Lean Digital Expert **from Ruhr University Bochum** and LMX.
- **Scrum Training** sequences and PSM I Assessment-Voucher for certified Scrum Master-Title
- **No additional costs:**
 - **all training infrastructure** costs included incl
 - **All licences** to use training software or learning factory costs included

➔ ● Fee per participant
14.900 €

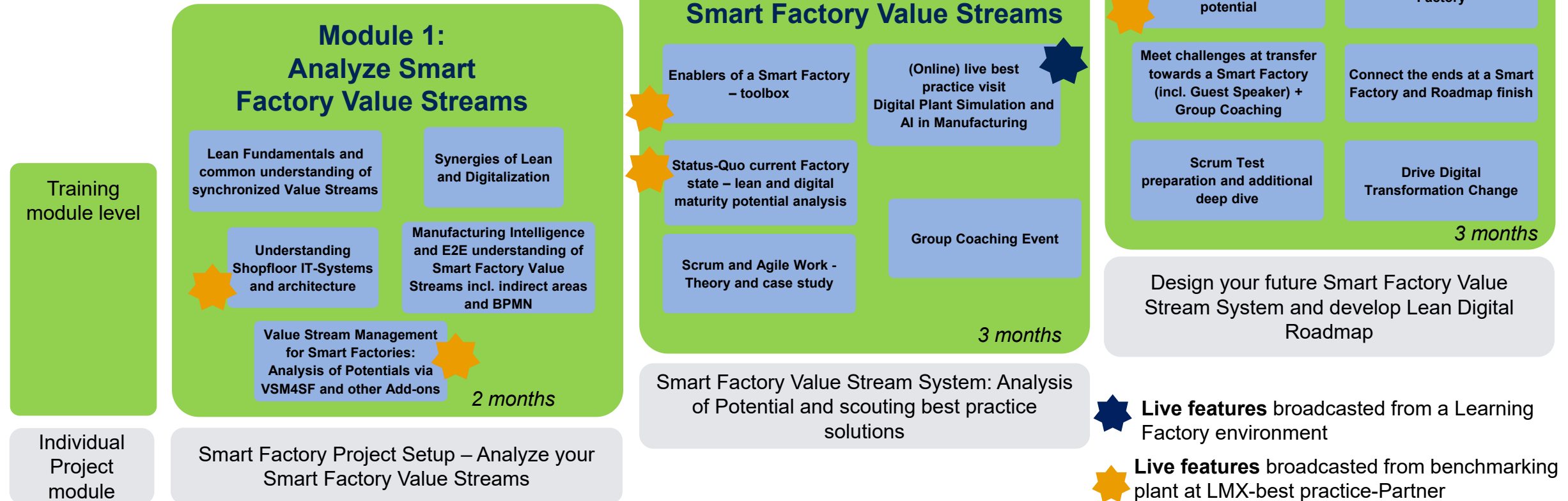


* Criteria for certification: participation at training sessions, successful online tests, delivered project

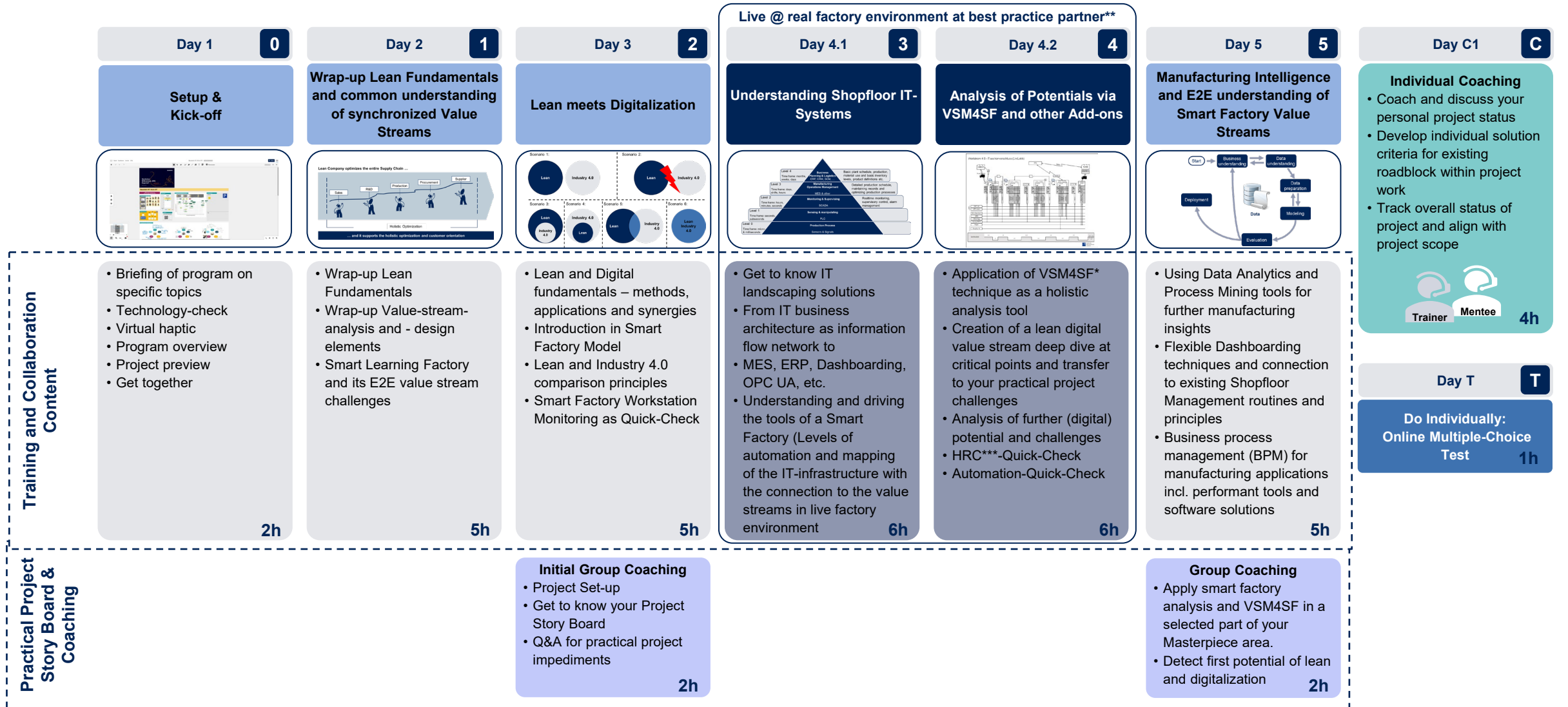
Learning journey of Senior Lean Digital Experts will ramp up and always combine lean and digitalization success factors – on training and on individual project level



Senior Lean Digital Experts will follow their qualification journey through 3 modules



Module 1 – Analyze your Smart Factory Value Streams




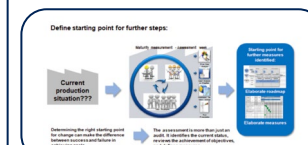


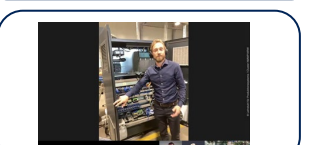
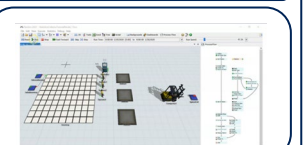

* Value Stream Management for Smart Factories (VSM4SF)

** Best practice partner → Gigaset Communications AG

*** HRC → Human Robot Collaboration



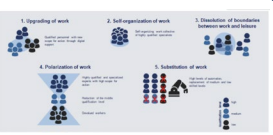

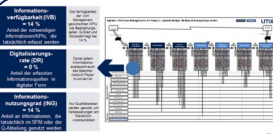


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Module 2 – Setting the Level of your Smart Factory Value Streams

		Live @ real factory environment			Live Best Practice Day			
		Day 1 6	Day 2 7	Day 3 8	Day 4 C	Day 5 9	Day C2 C	
		Scrum and Agile Work - Theory and case study 	Status-Quo current state of Smart Factory 	Enablers of a Smart Factory 	Group Coaching Day 	Online live best practice visit 	Digital Plant Simulation and AI in Manufacturing 	Individual Coaching <ul style="list-style-type: none"> Coach and discuss your personal project status Develop individual solution criteria for existing roadblock within project work Track overall status of project and align with project scope  4h
Training and Collaboration Content		<ul style="list-style-type: none"> Introduction and training of Agile and Scrum framework Agile in Manufacturing and Engineering Role as Scrum Master and work in an agile project Setup your agile project <i>Scrum Master certification voucher included in overall training fee</i> 8h	<ul style="list-style-type: none"> Apply Lean Digital Maturity-Assessment → Process, Leadership & People, Digitalization) Setting the Status-Quo at best practice partner and your own Factory Consolidation of all analysis steps Monitoring of use cases and practical results 7h	<ul style="list-style-type: none"> Understanding and driving the tools of a Smart Factory Get to know the Smart Factory Toolbox Best-Practice sharing of Smart Factory Applications 7h		<ul style="list-style-type: none"> Live Factory Tour with various examples of Smart Factory tools and applications a Production Plant at a selected LMX Premium Customer/LFF* Choice from... <ul style="list-style-type: none"> → examples on Digital Shopfloor Management → shopfloor IT architecture and information flow → insights of lean value stream design → automation, HRC 5h	<ul style="list-style-type: none"> Digital Simulation technologies Digital shadow and twin Application of AI in manufacturing 3h	
					Group Coaching <ul style="list-style-type: none"> Structured and prepared questions upfront on: <ul style="list-style-type: none"> Agile, IT-Topics Value Stream-Topics Personal project status Project race 4h		Day T T	Do Individually: Online Multiple-Choice Test 1h

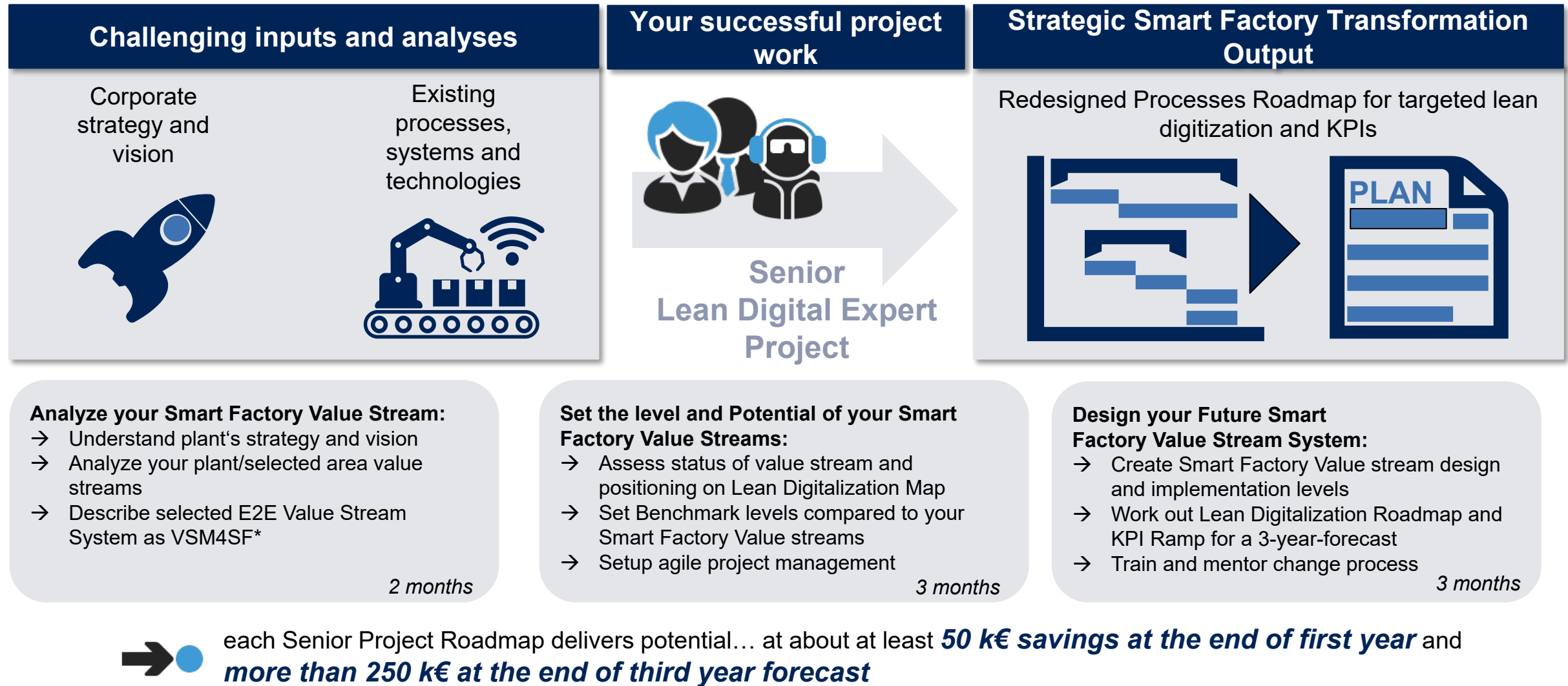
* LFF: Learning and Research Factory@Bochum University

Module 3 – Design your Future Smart Factory Value Stream System

Live @ real factory environment*		Day 1 11	Day 2 12	Day 3 13	Day 4 14	Day 5 15	Day 6 16	Day C3 C
		Design your Smart Factory 	Meet challenges at transfer towards a Smart Factory (incl. Guest Speaker) 	Drive Change of Lean Digital Transformation 	Roadmap your Smart Factory 	Connecting ends of your Smart Factory / Roadmap finish 	Scrum Test preparation and additional deep dive 	Individual Coaching <ul style="list-style-type: none"> Coach and discuss your personal project status Develop individual solution criteria for existing roadblock within project work Track overall status of project and align with project scope 
Training and Collaboration Content		<ul style="list-style-type: none"> Value Stream Design for Smart Factories Combining physical and virtual product flow Add support functions/indirect areas to VSD4SF Get to know Smart Factory Style Guides for green- and brownfield applications Technology and innovation scouting 	<ul style="list-style-type: none"> Guest speaker / Key note "our Transfer and Challenge" Know your status/challenges - "analyses/meet your analysis" Change Leadership COO Guest speaker 	<ul style="list-style-type: none"> Lean / digital Change Management and Leadership aspects based on the challenges of the developed roadmap Strategic Change Management at/towards a Smart Factory Future of work and digital Leadership Leadership benefiting of digital performance Mentoring 	<ul style="list-style-type: none"> Development of Smart Factory roadmaps and systematically define main fields of actions Smart Hoshin Kanri Connect lean digital KPIs with Business KPIs Lean-Digital-Leadership-Change Roadmap 	<ul style="list-style-type: none"> Describe and face the Challenges, Business, Digital and Lean KPIs (Set-up Point at plant etc.) Wrap-up Modules 	<ul style="list-style-type: none"> Deepen Scrum Framework in preparation of Professional Scrum Mater Assessment 	T - Days T Do Individually: Online Multiple-Choice Test 1h Do Individually: Professional Scrum Master (PSM I Assessment) 1h
	Practical Project Story Board & Coaching		Group Coaching <ul style="list-style-type: none"> Extend your analysis to multiple value streams and setup framework for designing a smart factory. Apply agile project work in your masterpiece. 		Group Coaching <ul style="list-style-type: none"> Design your smart factory Masterpiece area Roadmap your transfer of Lean Processes, Digitalization Strategy and organizational change 	Group Coaching <ul style="list-style-type: none"> Design your smart factory Masterpiece area Roadmap your transfer of Lean Processes, Digitalization Strategy and organizational change 		Day Z Z Senior Lean Digital Expert Certificate Approved Masterpiece

* Best practice partner → Gigaset Communications AG

Your project during 8-month training and coaching phase is consequently following training modules and delivers qualitative and quantitative results to up to more than 250 k€



* Value Stream Management for Smart Factories (VSM4SF)

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Certification project selection – can I choose and how to choose



Your project has to deal with many requirements...

But First of All:

It has to fit to your company and your management needs



These are some framework conditions, that may help you to discover your company and value streams from the Senior Lean Digital perspective...

Check 1:
Hoshin Kanri

Your project is already foreseen in your company's Hoshin Kanri/ Policy Deployment. That's fine!!

Check 4:
Strategic
needs/impact

Project area has to deal with strategic change. Raise of volume, competitive costs, lean automation. Develop Roadmap!

Check 2:
KPI Potential

Your project could help for quantitative savings like productivity/ efficiency gains or quality losses. Don't wait!

Check 5:
Adequate
Project size

Of course, to get 250 k€ revenue after 3 years, project area should offer adequate size of KPIs and physical value stream. Think holistically!

Check 3:
Upcoming
Digital
Challenge

There's need for digital transformation in your project area and you guide it both with lean and digital view. Smart, Lean, Digital!

Check 6:
Performance
Gap

You don't meet today's goal expectations at project area? Hey, this is a treasure and let's start to systematically solve!

**Even if you meet at least one of these Checkpoints or several of them, your project may be adequate!
Through first coaching sessions we will precise, align goals and lead you through pre-analysis.**

Active participation in training and accompanying project work will ramp up Lean Digital skills to a Senior level – at your personal and your plant's advantage

Experiences you made before you start the training

- ✓ You were experienced in managing Lean Projects on manufacturing department level
- ✓ You designed first value streams
- ✓ You know the problem-solving toolsets
- ✓ You started to act as coach within your organization
- ✓ Your leaders respect and get in your opinion concerning process development questions
- ✓ You touched or are at least keen on discovering the synergies of Lean and digitalization

What you want and will learn within training and project

- ✓ How to see and sketch value stream systems as a whole synchronized network
- ✓ How Smart Factory IT-solution work and they connect E2E-Lean Processes
- ✓ How to identify optimization potential on value stream system level
- ✓ How to design and simulate new value stream systems and roadmap them
- ✓ How to coach your leaders and Experts within lean / digital change challenges
- ✓ How to act and lead agile project structures

How plant manager profits with your training, project and future

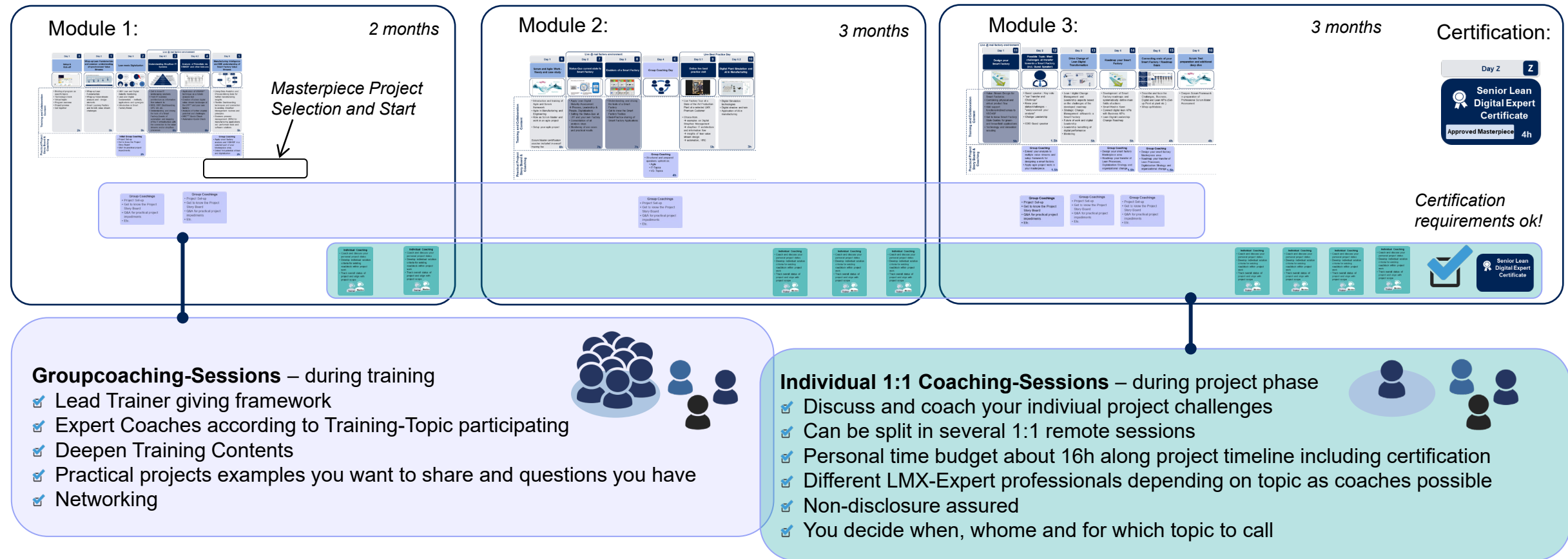
- ✓ An again more respected personality in developing your organization: processes – people – systems
- ✓ A strategic roadmap of a challenging area at your plant combined with quantified potential of at least 50k€ within first year
- ✓ A bilingual interface between Lean and Digital world
- ✓ A coach and sparring partner in strategic and operative questions
- ✓ A potential candidate for upcoming leadership roles



Will you check in?



Individual coaching with selected LMX mentors* upon your requirements is included in your training fee as your personal coaching time budget. Your choice!



Group coachings getting you future Seniors Lean Digital experts together
Individual and confidential coaching session in your pull-signal
LMX Experts for different training and project problem solving topics

*see following slide: mentors for lean and smart factory tools, change, IT shopfloor architecture, agile work

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Virtual coaching on the job: group coaching sessions and individual sessions based on personal needs are included in Senior Lean Digital Expert Program

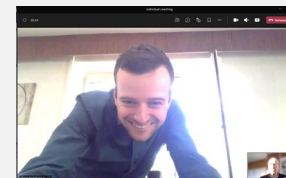
Virtual Coaching / on-the-job

- Joint **digital walk-through** in Miro Boards by the participants
- Joint **review of progress and projects**
- **Critical reflection** on **challenges** and **approaches to solving** one's own practical tasks
- Joint **removal of barriers**
- Support in the **application of methods** by the trainer
- The trainer acts as a **provider of feedback** and **input** for questions
- Determination of **next steps**

Group coaching sessions



Digital Whiteboards (Miro)



Individual coaching sessions

Group coaching benefits

- **Interdisciplinary exchange** between participants
- Get to know **best-practice transfer** of procedures
- Promotion of cross-team/cross-functional understanding
- Creation of a **community**

Each participant **actively presents** his or her practical project on a regular basis respecting NDA-restrictions

- Personal feedback on status
- Confidentially discuss solutions
- Individually select best fitting mentor competence profile for selected sessions
- Agile Work: agree time slots based on your project progress needs

Personal coaching benefits

Your coaches will provide a bunch of experience during group and individual coaching sessions through various methods and practical solutions around lean digitalization



Name/
Function

Christian Jagla,
Partner at LMX

Judith Fellsches,
Partner at LMX

Prof. Christian Magnus,
Professor University of
Applied Sciences

Alexander Schnichels,
Senior Consultant at
LMX

Felicitas Kell,
Project Manager at
LMX

Simon Wessing,
Senior Consultant at
LMX

Role in
Training
Program

- Lead Trainer
- Program Management
- Mentoring

- Trainer Business Process Management
- Trainer Agile
- Mentoring

- Trainer Smart Factory Design and Shopfloor IT Applications
- Mentoring

- Trainer Smart Factory Design and Lean Digitalization
- Mentoring

- Training Change Management
- Mentoring

- Trainer Smart Factory Design and Lean Digitalization
- Mentoring

Key
competences

- Smart Factory Design
- Coaching
- Lean Management
- Hoshin Kanri

- Business Process Management & Optimization
- Digitalization of processes
- Agile Transition

- Smart Factory Design
- Shopfloor IT Systems and Architecture

- Smart Factory Design
- Lean Manufacturing

- Lean Change Management
- Hoshin Kanri, Policy Deployment

- Smart Factory Design
- Lean Manufacturing

LinkedIn

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www.linkedin.com/in/christian-magnus/

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www.linkedin.com/in/felicitas-kell-64719a71/

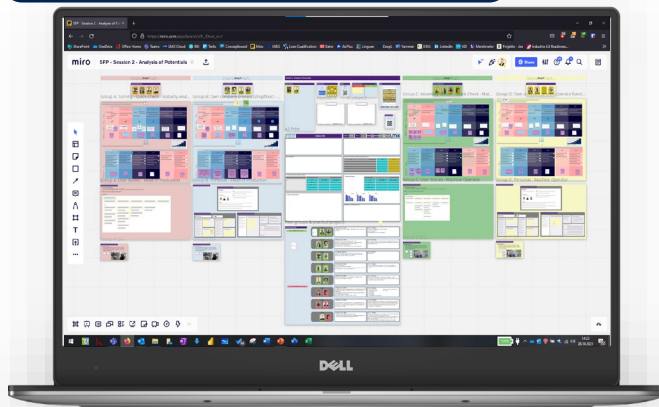
<https://www.linkedin.com/in/simon-we%C3%9Fing-81b574195/>

Based on the media mix, the virtual training concept brings the Shopfloor to the participant's screen – in theory modules, group exercises and live streams

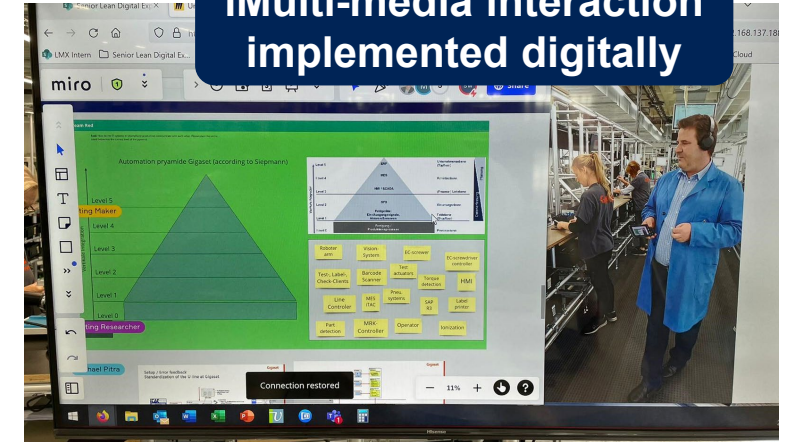
Microsoft-Teams



Miro

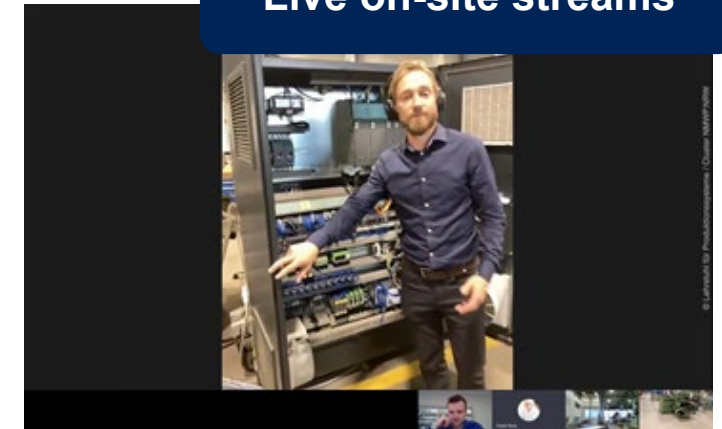


Multi-media interaction implemented digitally



The **targeted selection** of the **media used** always puts the **focus** on the **participant** and turns the **theory modules** into **live experiences**.

Live on-site streams



Including virtual live technology tour at the Learning Factory Bochum with deep dives on several systems (hardware & software)

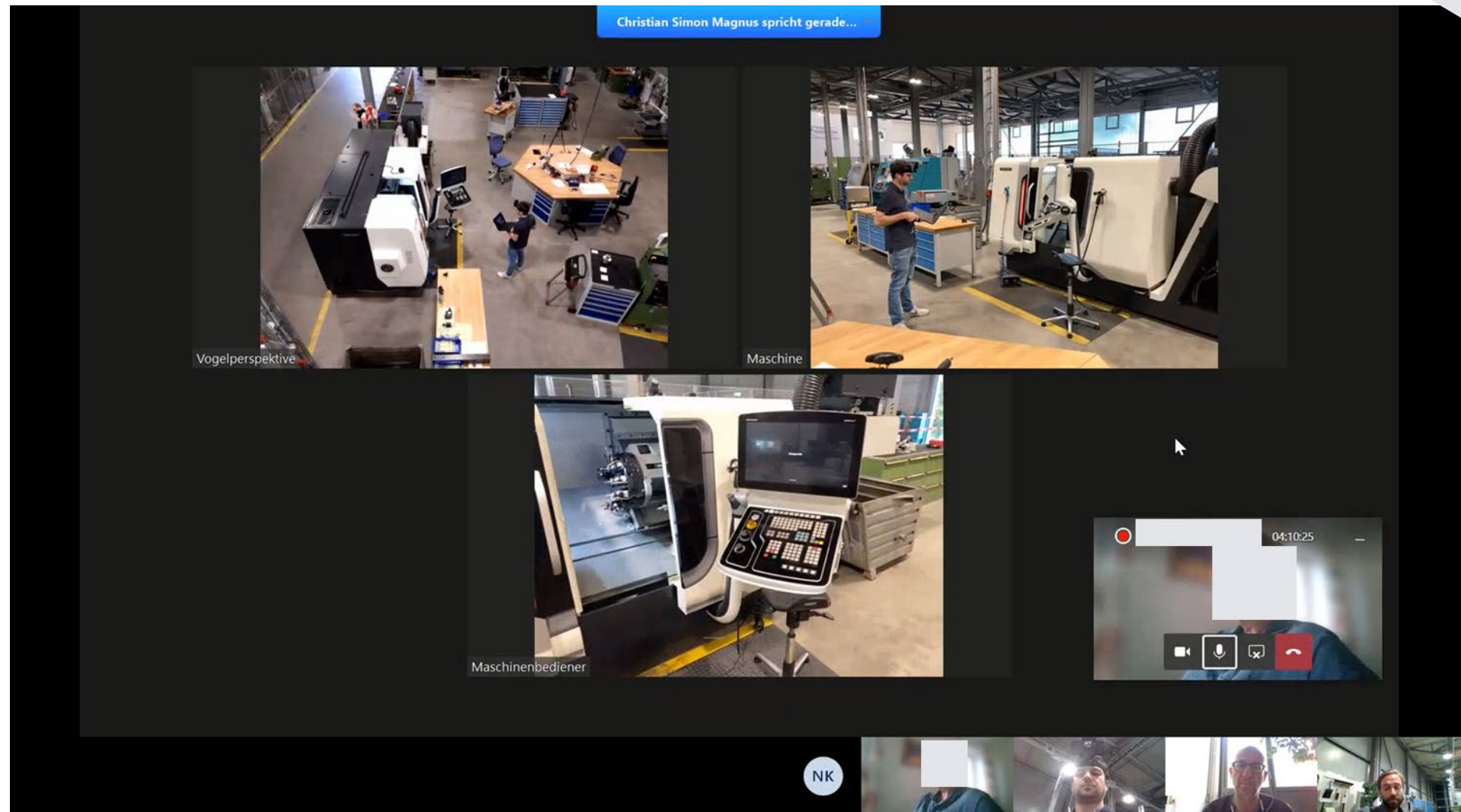


In the tour as well as during the exercise: suitable media support brings the training participant to the Gemba!

Source: Learning Factory Location © Lehrstuhl für Produktionssysteme (LPS), Bochum and Gigaset Communications AG

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Live streaming from the learning and research factory brings the shop floor from different perspectives realistically to the participants' screens



Example
Live-Streaming

Participants participate exclusively "remotely" and require the usual equipment for mobile work

Remote equipment



PC or laptop with camera turned on
Optional: Second screen



Stable broadband Internet connection



Quiet, undisturbed environment



Preferably headset with micro

Tools used in training

- For the training, the participants receive access for the tools used within the training
- **Administration rights are not necessary!**

- Communication Tools: MS Teams and MS SharePoint



Microsoft Teams



SharePoint

- Digital whiteboard: Miro



- Surveys: Mentimeter



Mentimeter

The application process at a glance

Registration via LMX website-links:



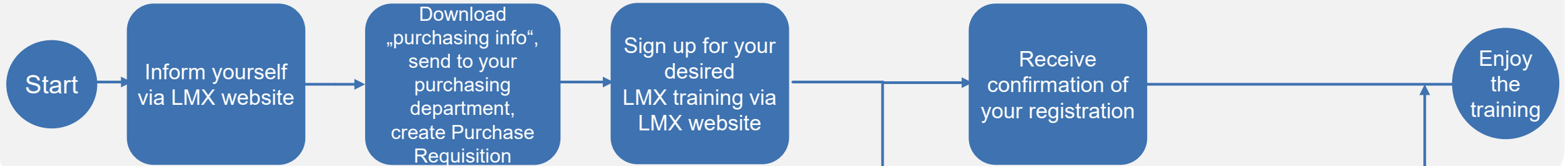
SIEMENS



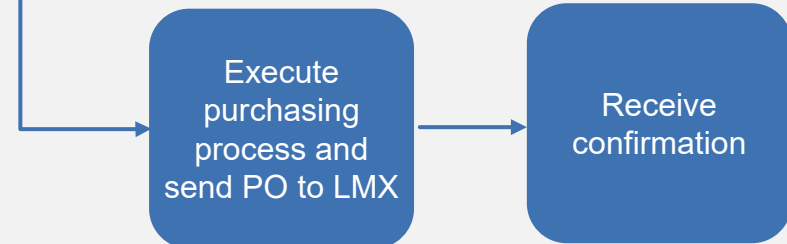
All upcoming Senior
Lean Digital Experts



Participant



Your Purchasing Department



Direct contact LMX

Please don't hesitate to contact LMX with all organizational matters around the training



Ulrike Schömig

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The total participation fee for the Senior Lean Digital Expert Learning Program is 14.900 EUR



Specifications	Fee (€)
<div>Run 2 Autumn 2023</div> <div>Senior Lean Digital Expert Learning Program<ul style="list-style-type: none">Module 1 – Analyze your Smart Factory Value StreamsModule 2 – Setting the Level of your Smart Factory Value StreamsModule 3 – Design your Future Smart Factory Value Stream SystemMinimum 10 participants – max. 15 participants18 days remote training & group coaching / in English or German</div>	14.900,- €

Based on the close cooperation with the Ruhr University Bochum, we have jointly founded 2 successful startups for further education and Smart Factory

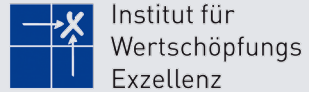
LMX GROUP

&

RUHR
UNIVERSITÄT
BOCHUM

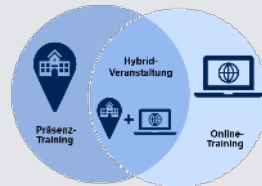
RUB

LPS
LEHRSTUHL FÜR
PRODUKTIONSSYSTEME



Qualifizierung für Professionals

vor Ort oder online



nexpro.digital

**Die Produktions-
experten für die
Smart Factory**



LFF
LPS LERN- UND
FORSCHUNGSFABRIK

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