

# Bringing Framework Curricular to Life



# Framework of the „State of the Art“ in Germany

- **VDI (Association of German Engineers)**
- **VDE (Association for Electrical, Electronic & Information Technologies)**
  - Set guidelines describing the state of the art
- **German Institute for Standardization (DIN Standards)**
  - Define standards referenced by laws
- **Smart Living Economic Initiative**
  - Nationwide neutral, cross-industry platform for pre-competitive cooperation in the Smart Living market



# Nele

## Apprentice: Electronics Technician for Building System Integration

- **Nationwide Uniform Training Regulations:**
  - Developed with the involvement of professional associations
  - Dual education system:
    - 70% Company
    - 30% Vocational School
  - Vocational Training Centers: Part of the company training
- **Development of Framework Curricula** based on training regulations
  - Implementation: Inter-company apprentice instruction
- **Development of concrete Projects** based on Framework Curricula and State of the Art
  - Customer orders processed by apprentices in an action-oriented manner
- In exchange with vocational schools and companies



# Thomas

## Skilled Craftsman: Trained Heating Installer

- **Nationwide and Chamber-Regulated Advanced Training Qualifications:**
  - Building on the skills acquired in training or further education
- **Three advanced training levels above the training level:**
  - Professional Specialist
  - Bachelor Professional (e.g. Master Craftsman)
  - Master Professional
- **Course development based on standards and guidelines**
  - Example: Installation of heat pumps according to VDI 4645
  - Courses with advanced training exams
  - Conveying content through concrete projects



# Michael

**Advanced Craftsman:** Master Electrician specializing in Energy and Building Technology  
Bachelor in Business Administration in Craftsmanship

- **Special Topics or Knowledge Updates**

- Latest guidelines, standards and regulations

- **New techniques in collaboration with professional associations and industry**

- Short seminars or lectures

→ Less action-oriented, more lecture-focused

# How to select learning content

## Helpful questions for selecting relevant learning content:

- Who is my target group / are the learners?
- What is the current development status of the target group/learners?
- What learning content is significant for learners to acquire the necessary knowledge, skills, and abilities?
- What is the importance of the topic for learners in current and future situations?
- What key competencies should learners acquire?
- What are the time-organizational framework conditions?
- Which (curricular) requirements must I comply with?

# Core-Competencies for the Energy Transition



# Key factors for successful course development



# Thank you for your attention!

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