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| Training | A2.Gen2 - Architecture Development |
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| Keyfacts | |
| Target Group | Aspiring Architects and Designer |

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| **Duration** | **3 days** |
| **Language** | **English or German** |
| **Setting** | **On-site or remote** |

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| Training Goals | The ultimate goal of this training is to understand fundamental concepts of Architecture Development. The particular learning goals of this training are:<br><br>**#1 - Fundamental Concepts of Architecture**<br>Participants know the fundamental concepts of Architecture, Architecture Description and Architecture Development. They are aware of the role of Architects in an interdisciplinary team and the relations with complementary stakeholders<br><br>**#2 - Architecture Development Methods**<br>Participants know fundamental concepts for development, validation, realization and maintenance of System Architecture and have a first idea about the utilization of model-based approaches<br><br>**#3 - Architecture Frameworks and Reference Architecture concepts**<br>Participants know different existing Architecture Frameworks, Reference Architectures and Development Methods |

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| Training Content | **Variation Points:**<br><br>(1) System/Software Variations<br>○ Variant: "System Architecture"<br>○ Variant: "Software Architecture"<br><br>(2) Domain Variations<br>○ Automotive<br>○ Smart Energy Systems<br>○ Smart City<br>○ Industrial Production Systems |
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| | **Introduction to Architecture**<br>• The Role of Architecture<br>• Architecture, Architecture Description and Architecture Development<br><br>**Architectural Drivers**<br>• What are Architectural Drivers?<br>• Conflicting Architectural Drivers<br><br>**Architecture Description**<br>• Stakeholder Concerns, Viewpoints, and Views<br>• Domain Specific Concepts<br><br>**Architecture Development**<br>• Fundamental Concepts for Architecture Development |

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| Training Content | **Architecture Models**<br>• From "Document-Centric" to "Model-Based"<br>• Introduction to fundamental concepts of Model Based Systems Engineering (MBSE)<br><br>**Alternative Architectures and Architectural Decisions**<br>• Finding alternative System Architectures<br>• Making Architectural Decisions<br><br>**Developing "good" Architecture**<br>• Architecture Principles<br>• Architecture Patterns<br><br>**Architecture Frameworks and Reference Architectures**<br>• Content depends on Training Variant<br><br>**Maintaining Architecture**<br>• Managing Technical Debt<br>• Acceptance, Refactororing, Reengineering, and Reverse Engineering Strategies<br><br>**The Role of an Architect**<br>• What makes a good Architect?<br>• The Role of an Architect in an interdisciplinary team<br>• Architects and Systems Engineers |
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| Learning Methods and Didactics | Theory Inputs combined with examples and practical exercises to practice learned methods |
| Your Benefit | This training provides an introduction and overview on fundamental concepts of architecture development and helps aspiring architects and designers to shape their inherent individual learning path. |
| Your Trainer | **FH-Prof. Dr. Christian Neureiter**<br>neureiter@successfactory.cc<br>  <br>Christian is Professor at the School of Information Technology and Digitalisation at Salzburg University of Applied Sciences. As head of the "Center for Dependable Systems Engineering" he is an expert in this field and has profound knowledge on the matter.<br>Asides his academic role, Christian has 10+ years of experience as consultant and trainer<br>at the Successfactory Consulting group with a particular focus on Leadership, Software, and Systems Engineering related topics. |