



GEDS General Enterprise Data Systems

Information Technology
Services, Development, Distribution



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GEDS Services

Software Engineering



GEDS Software Engineering Overall view



- Performances
- Methods
- Approach
- Project procedure
- Technologies



Software Engineering Performances



Programming on request

- We take every step on the way to the realisation of your software solution
- We work on the basis of accepted project standards (V-Model XT)
- We realise your solution with different technologies

Project support

- Our developer support your existing project team by realising parts of your project locally with the help of their expertise and special knowledge and under your coordination.

Project Coaching

- The Project Coaching contains the conception and planning of a project which is then realised under the coordination of the project coach and your developers.
- Our project coaches consult you in technology questions and train your employees in technologies.

Architecture consulting

- The infrastructure of the IT field needs a clear concept so that a solid and appropriate system is made. We discuss with you together what is necessary and reasonable.



Software Engineering Methods



Software development on the basis of the V-Model XT of the state (KBSt)

- Approach to the accomplishment of IT projects orients on the V-Modell of the state
- The methodology is adapted to GEDS general conditions
- it depends on the kind and size of the project

**KBSt = Koordinierungs- und Beratungsstelle der Bundesregierung für die
Informationstechnik in der Bundesverwaltung**



Software Engineering Approach



Incremental system development

- The system, that has to be realised, is planned on the whole, but then is established in different realising steps (increments)
- With each increment there are added more functions to the IT system
- Increments are planned in the way, that there are productively usable partial solutions after completion



Software Engineering Approach



Intensive comprehension of the user-application development

- Partial solutions are early made available
- Experiences from the use of a system version can be implemented in the specification of the following steps of realisation
- Practical suitability and usability are improved
- Acceptance of the user increases
- Aberrations are early recognised and the risk to fail the target aims is reduced



Software Engineering Approach



Object-oriented software development

- The functions of the IT system are implemented in classes and provided as objects
- Changes and enlargements in the implementation of a class are practicable without consequences on other system parts
- Changes and enlargements are practicable more quickly



Software Engineering Approach



Rapid Prototyping

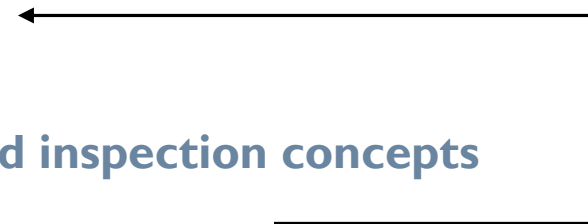
- There will be provided rapid prototypes for one component of an IT system
- Functions are tested and the thereby won cognitions are entered in the requirements
- Different implementations for success-critical components can be compared with each other and an optimal solution can be found



Software Engineering Project procedure



- Project preliminary discussion
- Build requirements (delineation) and an offering
- Define a project team and constitute a project guarantor
- Build an entire specification (Requirements specifications)
- Specify system (parts)
- Build a prototype
- Define an implementation, integration and inspection concepts
- Design, build and test system (parts)
- Train user
- Accept the project
- Customer service





Software Engineering Technologies



<p>Programming language and technologies</p> <ul style="list-style-type: none"> •C++, C#, C •HTML, DHTML, XML, Java, JavaScript, PHP <ul style="list-style-type: none"> •MS Access 2.0, 97, 2000, XP, 2003 •Visual Studio 6.0 •VB (Visual Basic), VBA •HTML, DHTML, XML, Java, JavaScript, PHP 	<p>Database systems</p> <ul style="list-style-type: none"> •MS SQL Server •MS-ACCESS •Oracle Database •MySQL Server
<p>Software Engineering Methods</p> <ul style="list-style-type: none"> •UML, OOA/OOD, Petri-Networks •State-Transition-Diagrams •Entity-Relationship-Model •Structure charts 	<p>Operating systems/Platforms</p> <ul style="list-style-type: none"> •Microsoft Windows XP, 2000, CE, NT •LINUX, div. UNIX-Derivate •.Net Framework, ASP.Net •Internet / Intranet / Extranet •Lotus Notes



If you answer one of these questions with “YES“ ...

- Are you looking for a partner with whom you want to realise your projects “on time, on budget, on-quality”?
- Are you looking for a company whose employees respond to you and observe you from the first moment on?
- Are you looking for a team of developers that is experienced, far-seeing, reliable, communicative and pragmatic?
- Are you looking for a company with which you want to establish a long-term partnership?

... then you should contact us!



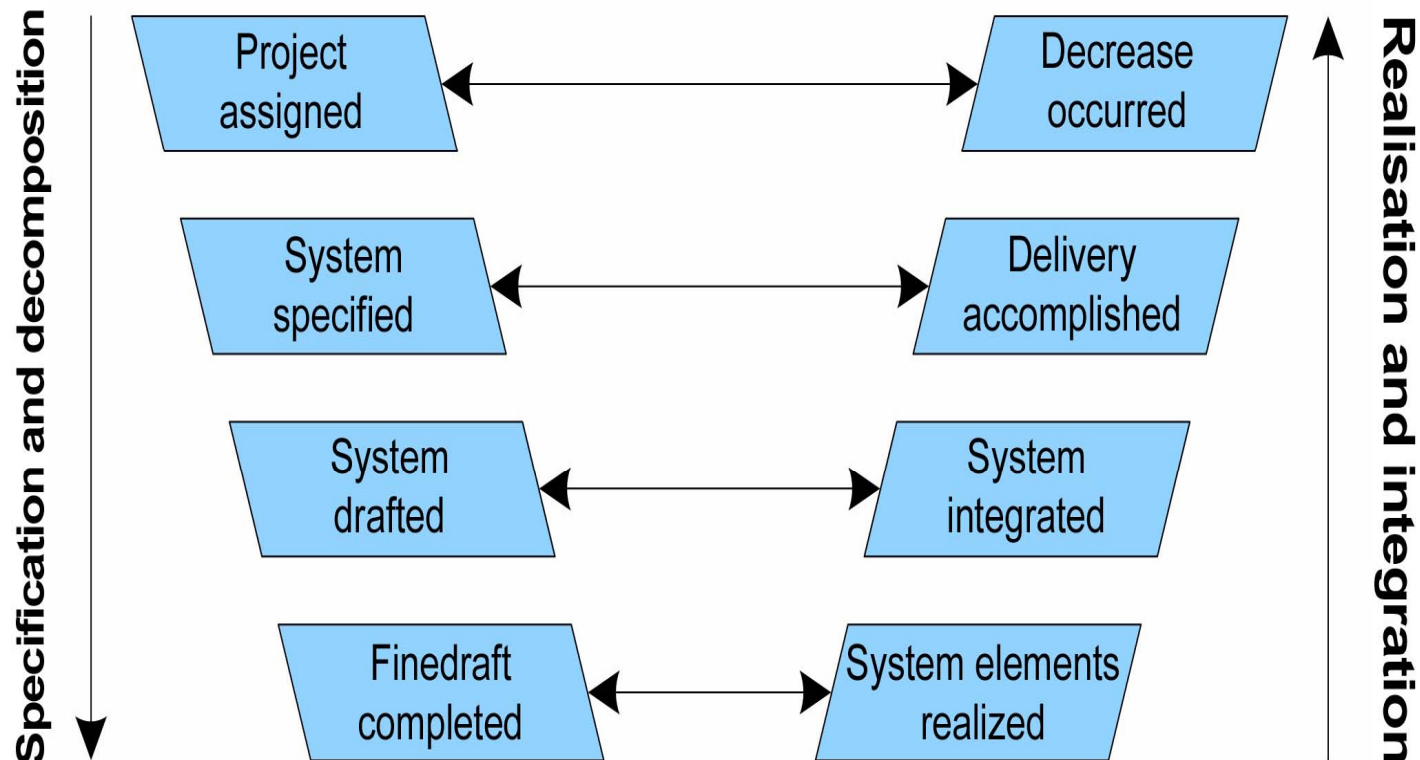
Appendix

V-Model XT



System construction overview

Verification and validation





- **Requirements (delineation)**
- **entire system specifications (Requirements specifications)**
- Threats and system security analysis
- **System architecture**
- Supporting system architecture
- **System specification**
- Specification of logical support
- Test specification system element
- **Implementation, Integration and inspection concept system / supporting system**
- Test specification system element
- **HW architecture and SW architecture**
- **HW specification und SW specification**
- Logistic support concept
- External unit specification

Project assigned

Entire system

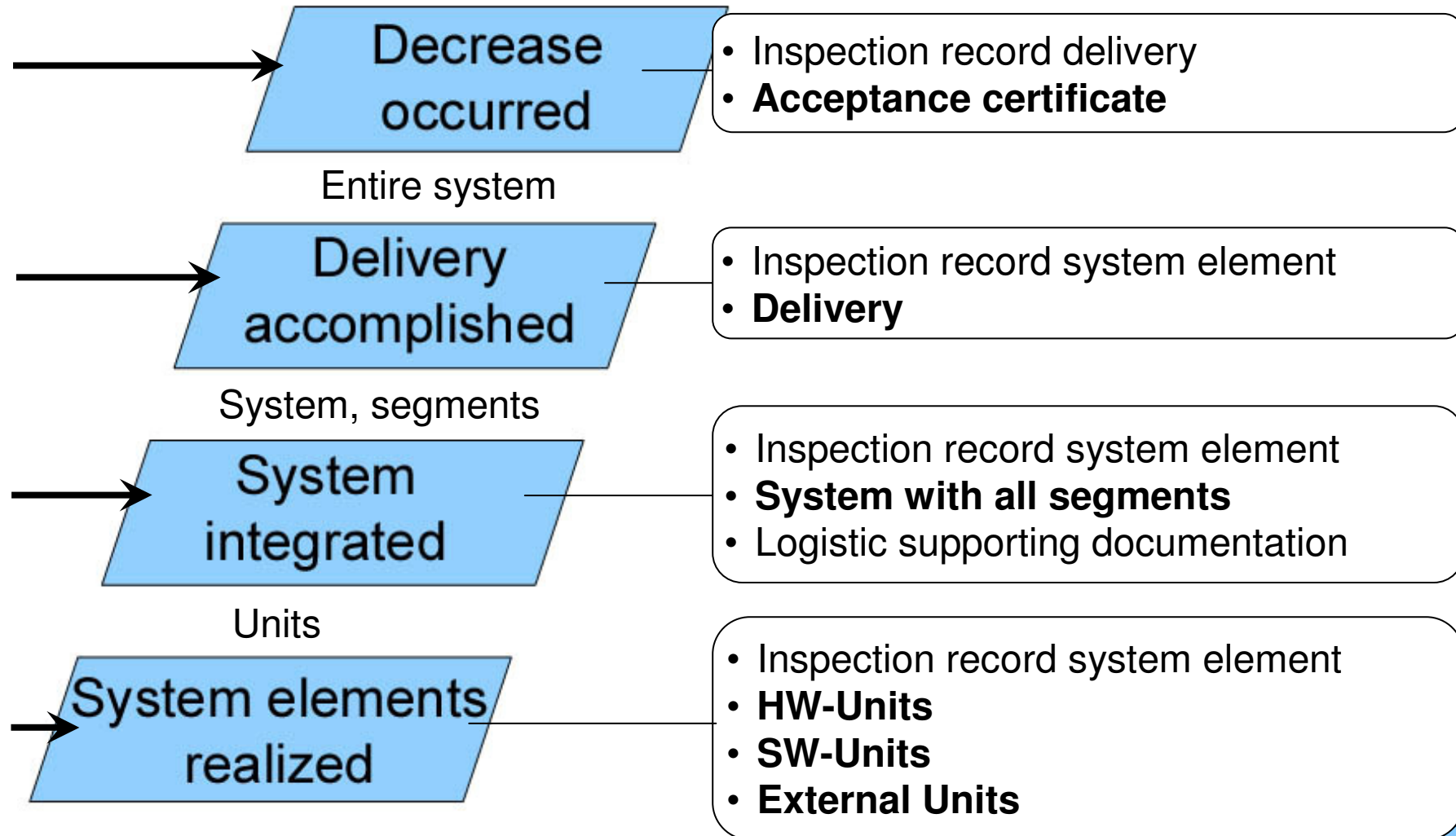
System specified

System, segments

System drafted

Units

Finedraft completed





Contact!

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