



Components for an extensible Enterprise e-Learning Environment. Success by Modularity.



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Service-Line Systems Integration

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Outline.

- Introduction and motivation
- Planning and conception
- Components
- Systems and platforms
- Conclusions

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e-Learning in innovative enterprises. From the subject to a modular solution.

Granularity allows flexibility.

e-Learning ...

- describes learning by means of latest information and communication technologies
- is based on methodical and didactical applied teaching and learning concepts
- applies multi-medial training materials



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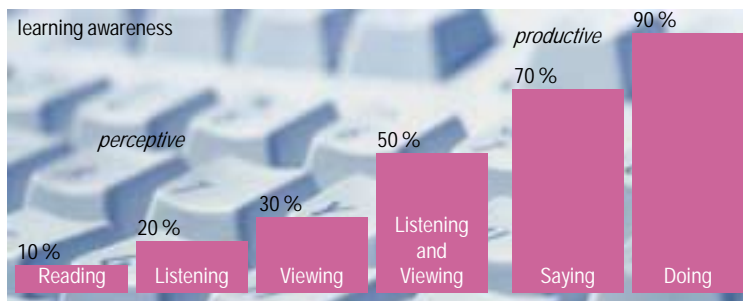
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e-Learning in innovative enterprises. Learning by doing.

Active learning beats perceptual methods for successful recapitulation.

How do we learn?

- object oriented learning \Rightarrow knowledge
- method oriented learning \Rightarrow ability
- process oriented learning \Rightarrow proficiency



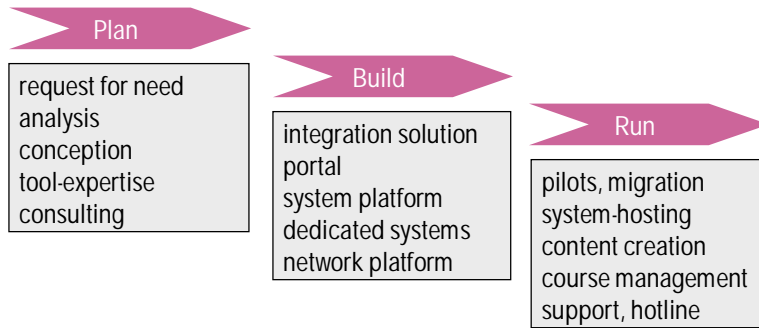
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e-Learning by T-Systems. One face to the customer.

Multi-step process for support of optimised customer individual learning solutions.

Modular process building blocks



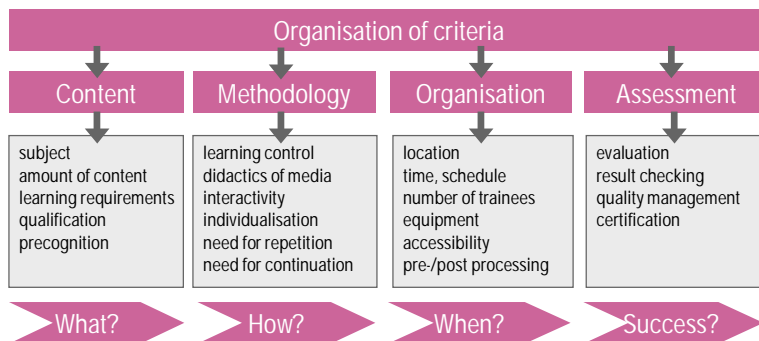
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e-Learning planning and conception. Multiple criteria.

Structured analysis and planning of the entire learning environment.

Common view Conceptual design by different experts



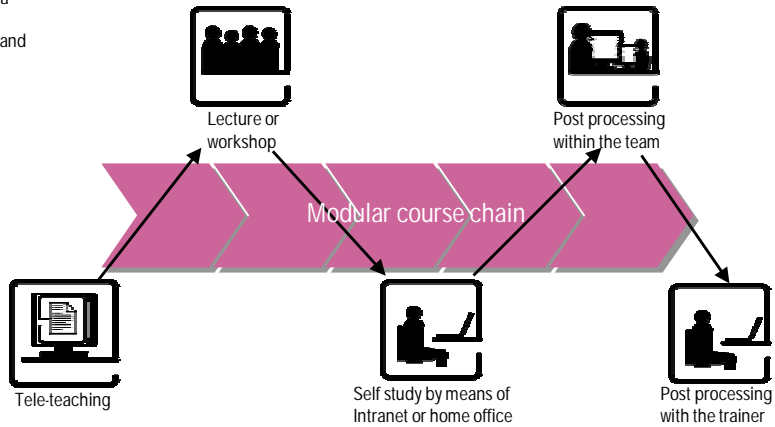
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e-Learning planning and conception. Planning of events.

Useful mixture of presence and tele-learning components provides a high grade of independence and individuality.

Modular planning of presence and remote events



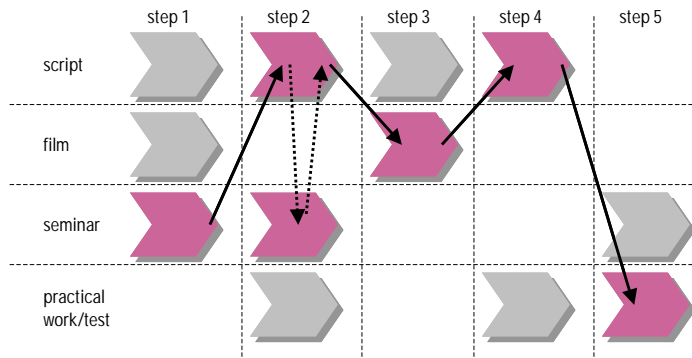
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e-Learning planning and conception. Learning alternatives.

Support of individual learning strategies by different methods and media.

Choice between different learning methods Stepwise individual selection of appropriate learning methods



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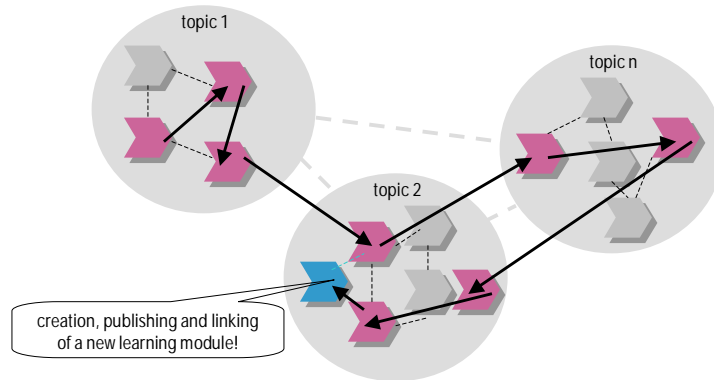
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e-Learning planning and conception. Virtual learning path.

Definition of an individual schedule following actual needs and pre-knowledge.

Creation of new learning modules.

Based on small indexed learning modules
Static or dynamic chain through hierarchical topic clusters
Sub-path selection of a predefined knowledge network



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e-Learning planning and conception. The future of electronic teaching and learning.

Trainee becomes trainer and vice versa.

Trends

- convergence of e-Learning and electronic publishing
- combination of e-Learning and knowledge management
- adaptive process oriented knowledge libraries
- traditional trainers move to moderators

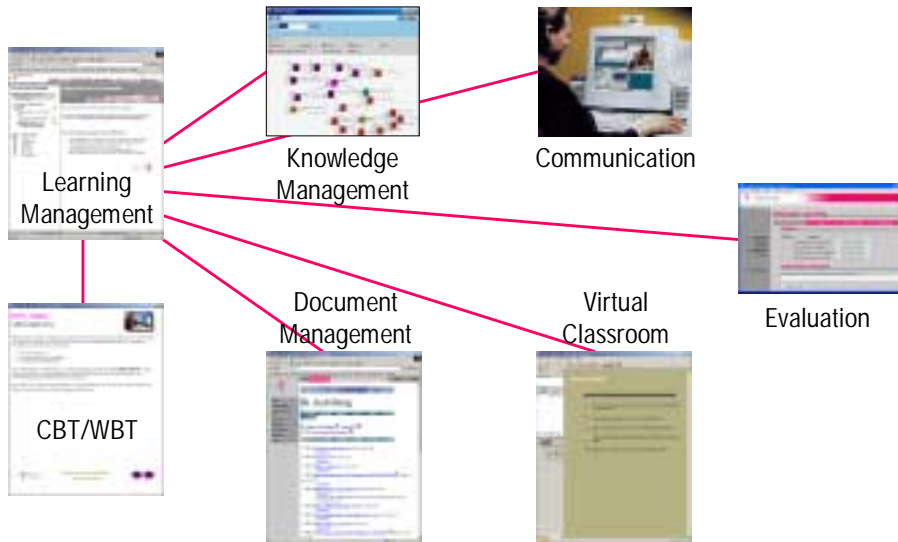
Recommendations

- meta-index using selected subsets of standardised attributes (LOM, SCORM) and predefined attributes
- choice of intuitive and easy to handle authoring tools
- support of module based annotation and feedback tools
- new document quality criteria are required

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e-Learning components. Modular set of systems and tools.

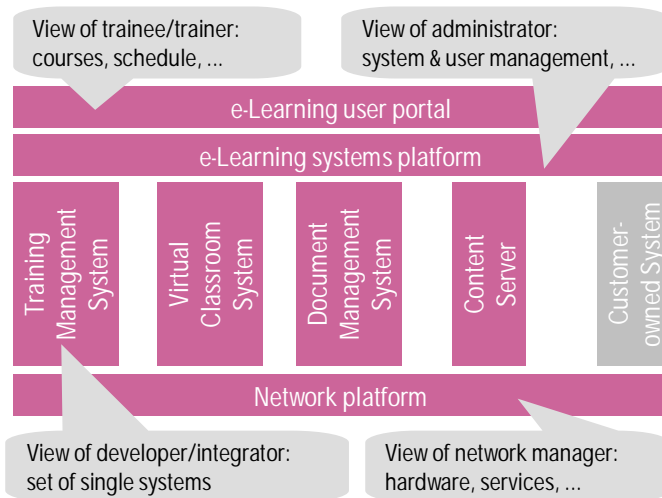


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e-Learning systems and platforms. Multiple views.

Clearly defined interfaces to support interaction of single systems under the roof of a common look and feel.



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e-Learning systems and platforms. User portal.

Personalised and intuitive look & feel increase user acceptance.



Characterisation:

- central and configurable user entry point

Advantages:

- web-based portal access
 - intuitive handling
 - no software installation
- user groups & mandates
- personalisation
- integration of additional information services
- self-registration
- corporate design

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e-Learning systems and platforms. Systems platform.

Optimisation of hard- and software, one-stop configuration and maintenance.

Coming next:
ASP solutions



Characterisation:

- customer specific system solution for integration and administration of all system components

Advantages:

- modular configuration
- new systems on-demand
- single sign-on (login)
- simple consistent user administration
- data consistence between systems
- database reusability
- reliable security concept

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e-Learning systems and platforms. Network platform.

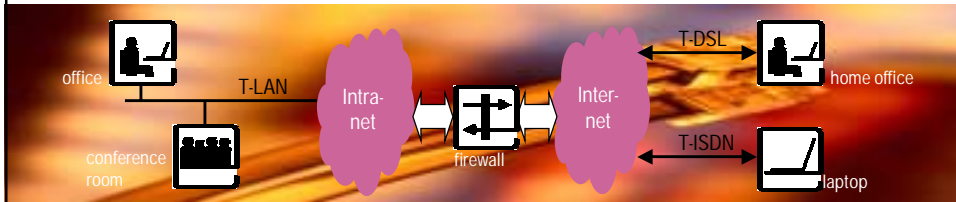
Adapted network access for different equipment from multiple locations.

Characterisation:

- common IP-based network infrastructure for all systems

Advantages:

- minimisation of administration overhead
- integration of multiple access networks (VPN, DSL, ISDN, modem) and different customer premises equipment
- modular extension on demand
- common IT service and security concept



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e-Learning systems and platforms. Intranet and Internet.

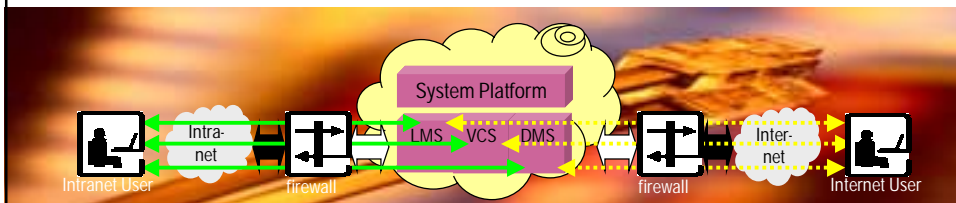
Flexible and secure system access from both, Intra- und Internet.

Characterisation:

- secure access by Intranet- und Internet users to common system components

Advantages:

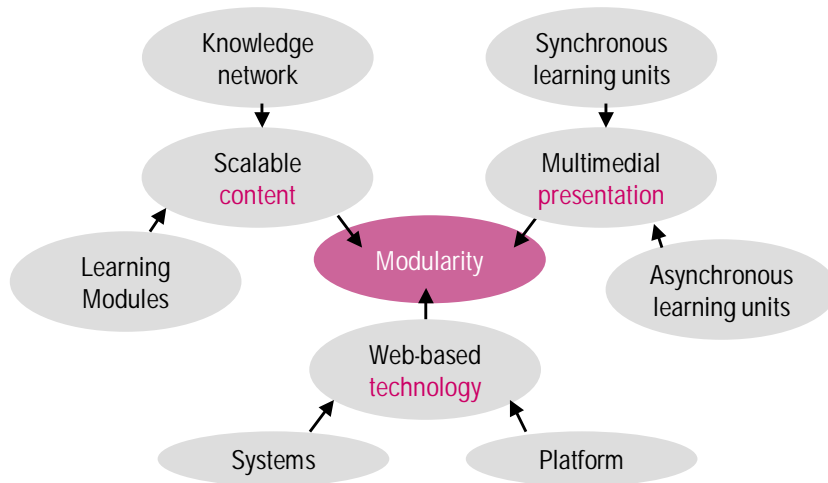
- each system instance only once in a "demilitarised zone" (DMZ)
- no cross access from Internet into Intranet and vice versa



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Conclusion.
Multi-dimensional modularity.



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Conclusion.
Theses.

T-Systems is an experienced system integrator with support of Plan, Build and Run.

- *e-Learning* is an extension of traditional teaching and learning concepts, not a replacement; is part of innovative enterprises.
- *Modularity* supports course consumption, content creation as well as system design and maintenance.
- *ETDs* are looking for more granularity and indexation to be successfully integrated as e-learning content.
- *Single Systems* are selected on demand and are integrated as consistent web-based *Portal Solution*.
- *Intuitive Use* of tools and *Access* over existing networks (Intra-/Internet) increase user acceptance.

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