

# ePrescribing Implementation in Sweden

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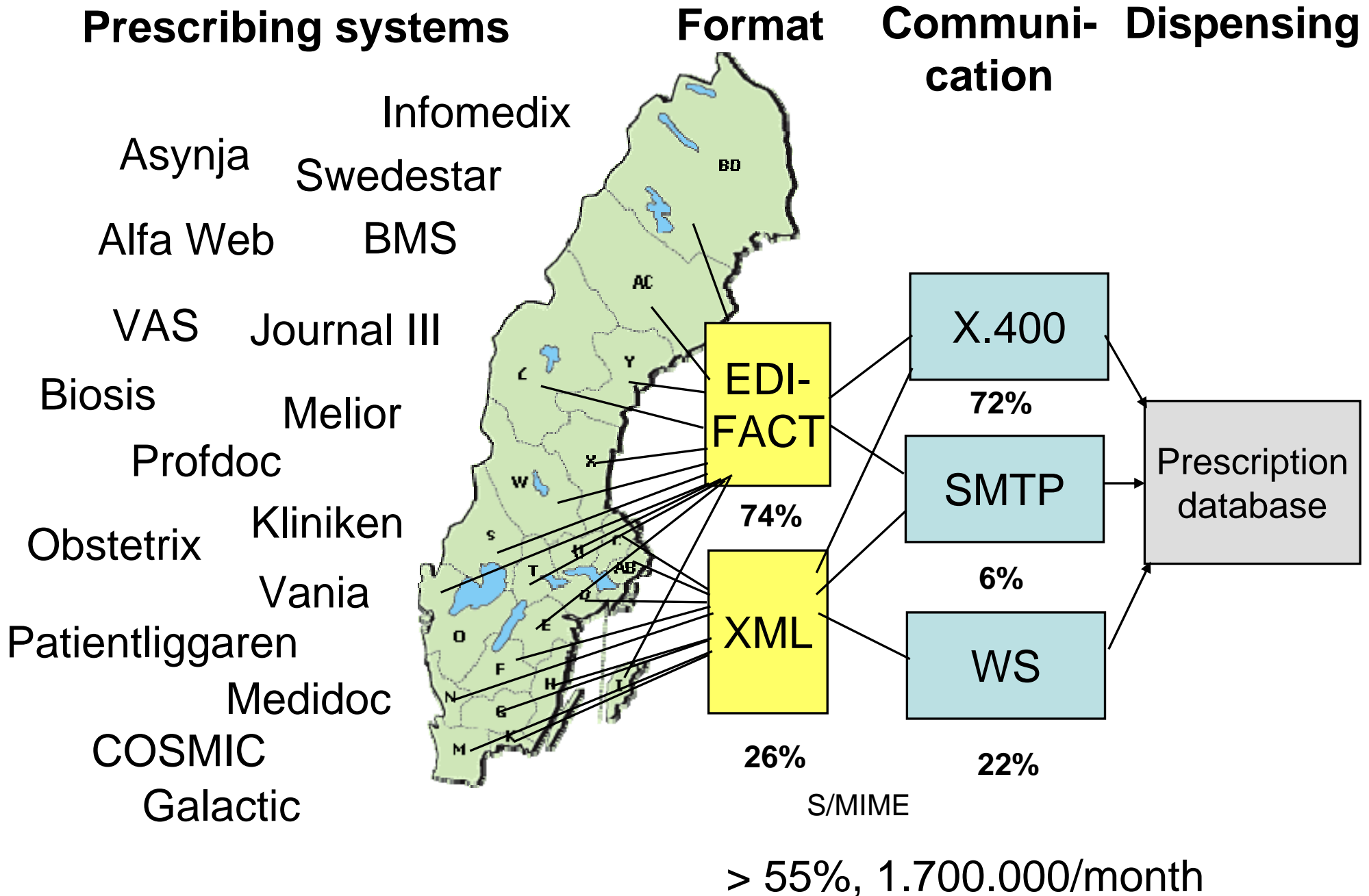
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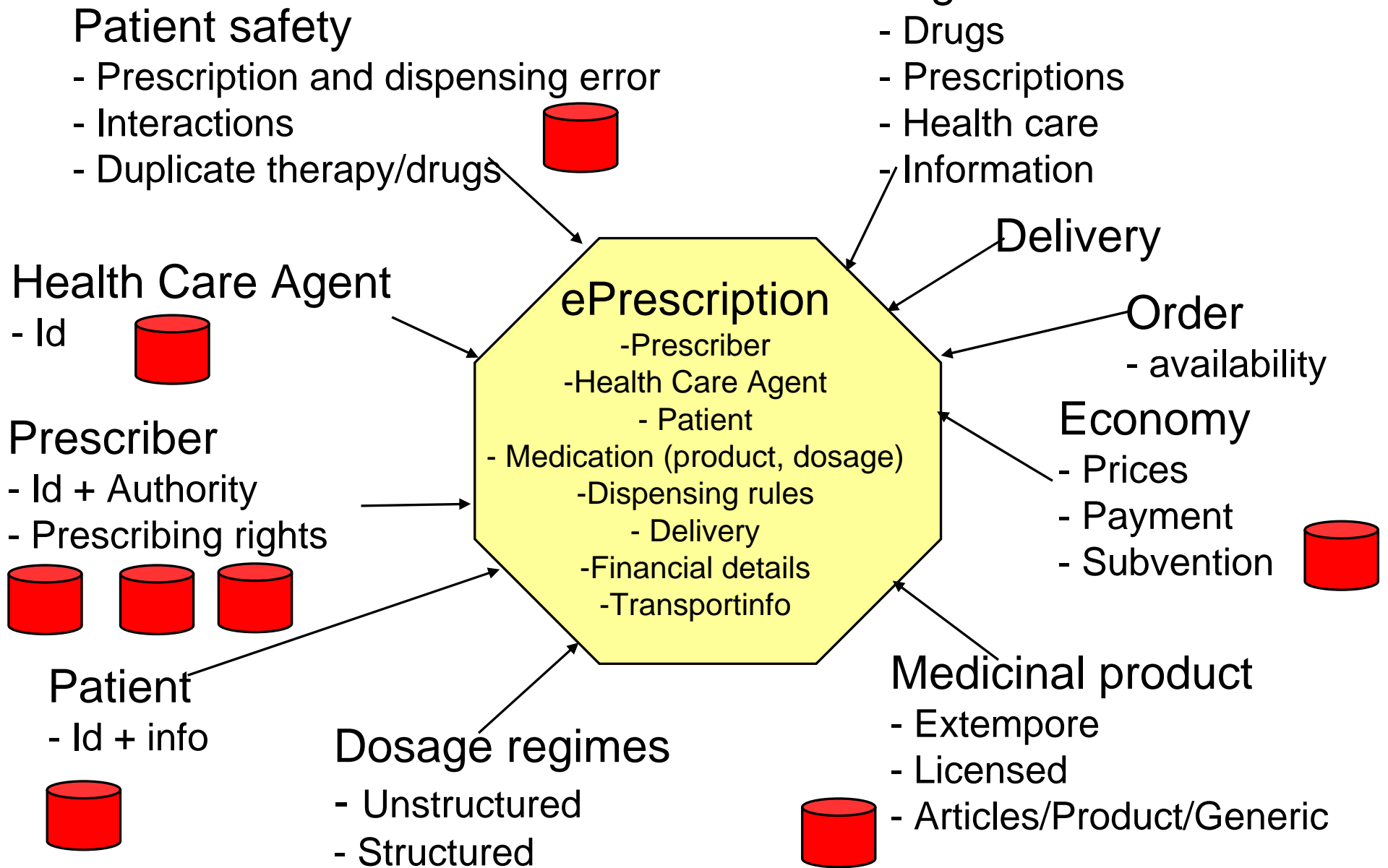
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# ePrescribing Implementation in Sweden

- ePrescribing process flow
- ePrescription message and external demands
- ePrescribing – Yesterday – Tomorrow
- From standard to implementation
- Baseline for quality and new functionality
- Control and receipts mechanism
- Conclusion



# ePrescription message – external complexity



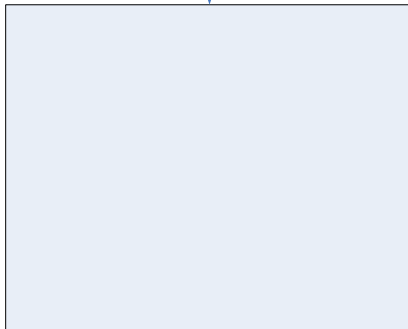
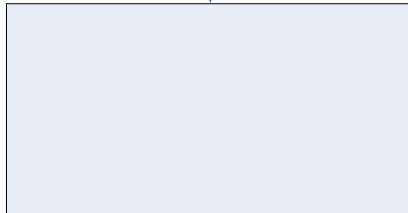
# ePrescribing - Yesterday

- Focus on acceptance among users
- Growth of volumes
- Initial savings based on substitution of paper
- New phenomena, higher acceptance of failures
- Manual handling of errors late in process
- Focus on free form, unstructured information, "Freedom of expression"
- Seen as an alternative to paper

# ePrescription – Today and tomorrow

- Accepted as "normal" > 50%, not an alternative to paper
- Expectation of flawless functioning 24\*7, strong dependency
- Formalization, structured information and control for patient safety and process quality
- Expected savings from process efficiency and new services – information value increased
- From message handling to interactive services

# From standard to implementation



**Create possibilities** for future development and implementation. Involves many Applications with different needs and legislations. **Changes slowly.**



**Restrict possibilities** for a safe and error free communication. Applies to limited applications and national legislation. **Changes regularly.**

UNLV 1507

# Baseline for quality and new functionality

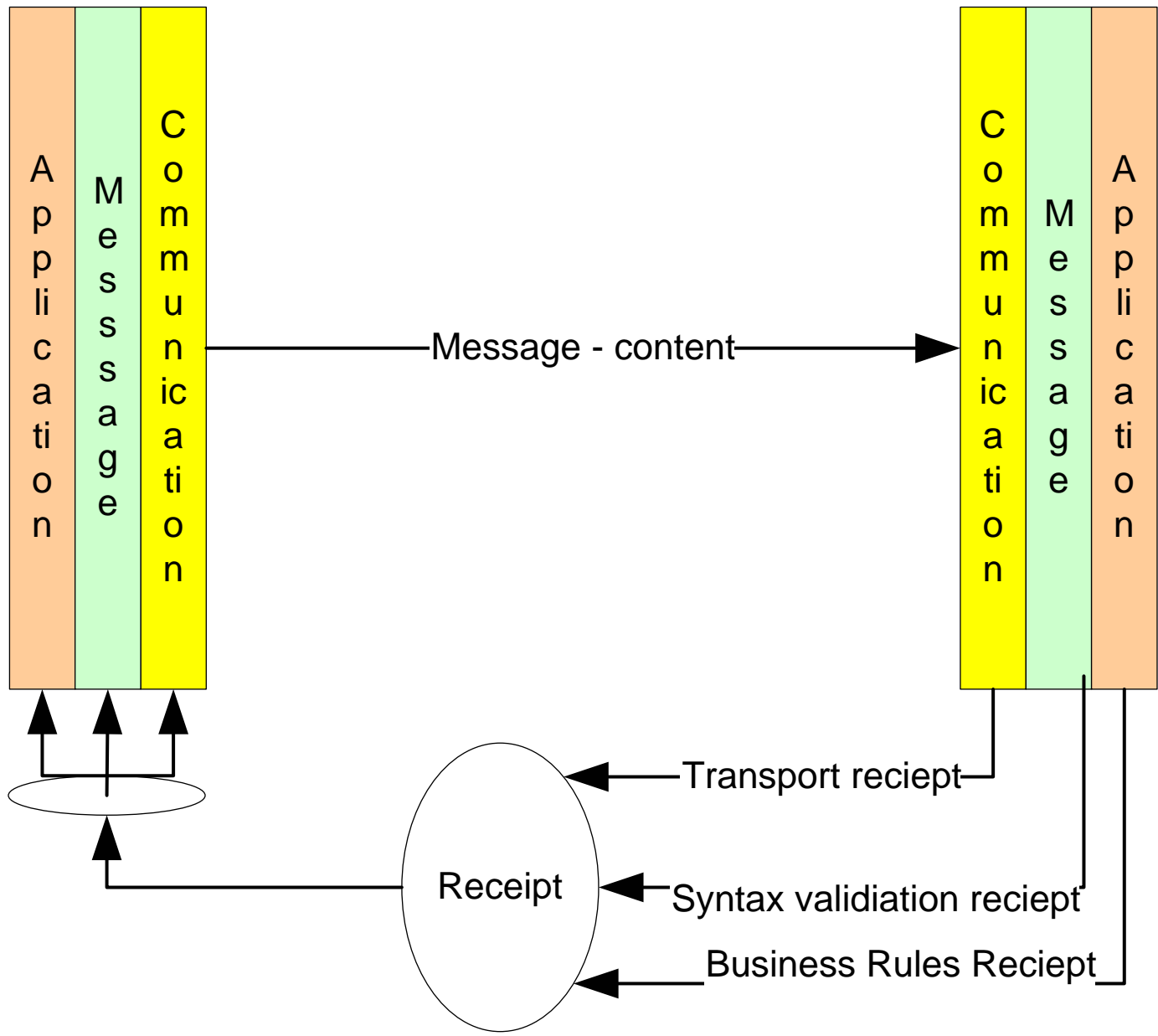
- XML-schema for validation early in Prescribing process (EMR, ePrescription servers) – ENV 13607 + Message Header + Acknowledge message
  - Validation of valid codes, data types, ranges, patterns
  - Improved traceability (UUID, Systemid) and acknowledge message (structural and business rule validation)

# Baseline for quality and new functionality

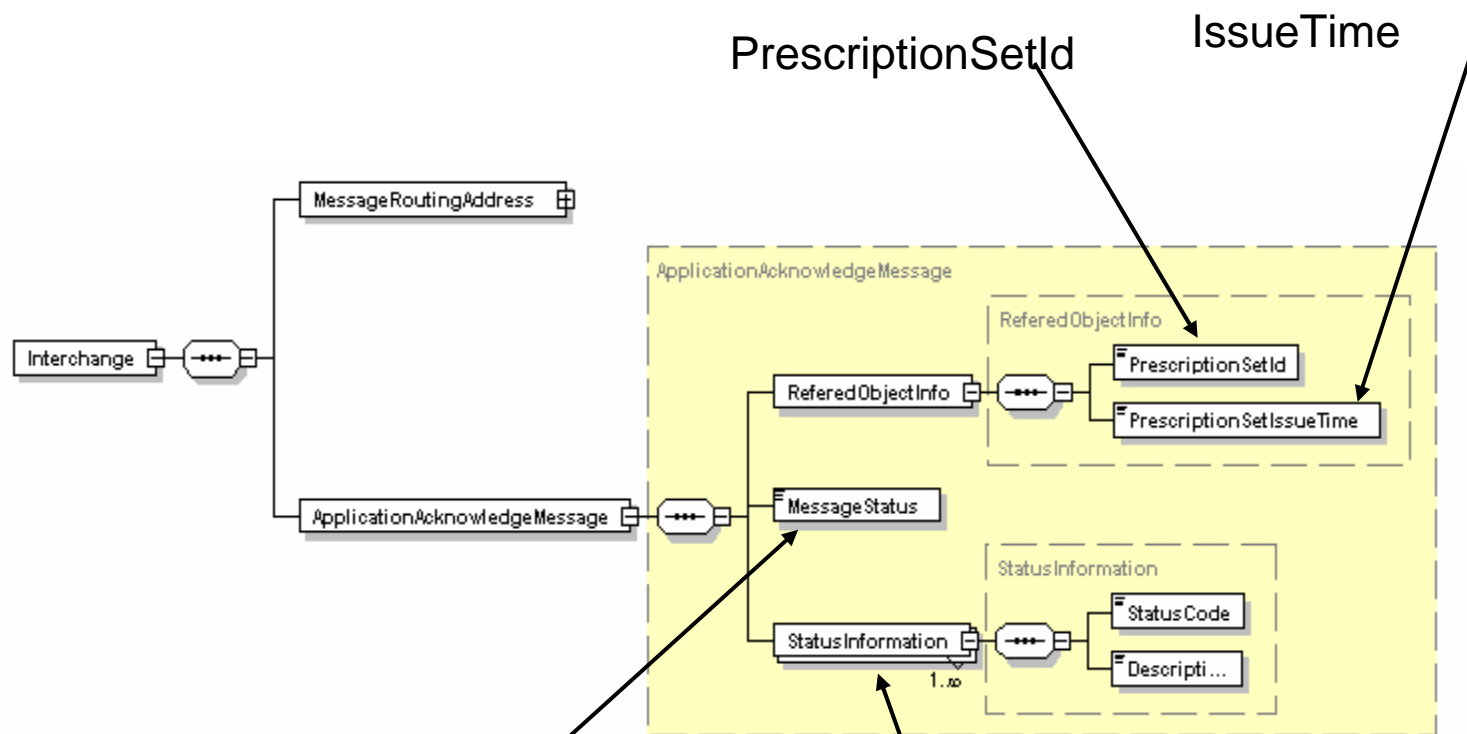
- Documented business rules for content validation
  - Examples:
    - If a medicinal product is prescribed it is obligatory with dosage instructions
    - When prescribing narcotic drugs Prescriber code and patient address i obligatory
    - Control of Prescriber code (valid, limited rights, specialist)
    - Control of drug id (existing, available on the market, withdrawn, not available until ....)

# General demands – Communication Health Care - Pharmacy

- A Prescriber should be able to send an ePrescription and get a quick receipt that it arrived to and was accepted by the pharmacy
- When errors occurs information should be sent to the right level:
  - When an ePrescription cannot be dispensed due to an error of content (structural or legal) or to technical communication failures a meaningful message should be communicated to the Prescriber and patient in close proximity to the Prescribing event.
  - If the error involves a patient risk medical responsible should be noticed
  - If the error involves a systematic error in any system in the process, support and maintenance responsible for respective system be noticed
  - If the error involves a failure in communication the different support organizations must be noticed



# ApplicationAcknowledgeMessage



## Overall status on message

- 0 = Accepted without any detected errors
- 1 = Accepted with amendments
- 2 = Rejected, cannot be treated by receiver

- Possible to leave several messages when needed
- Obligatory

# Baseline for quality and new functionality

- New functionality
  - Interactive services (availability)
  - Quick (seconds) feed back (structural and content validation)
  - Prescription of products/generics
  - Structured dosage regimes
- MEDPRE and EDIFACT – closed down 2007/2008
- Web services – needed to meet the demands

# Asynchronous /synchronous communication

- Communication
  - Synchronic: Direct response on communication errors
- Receipts
  - Synchronic: Receipts with interactive validation
- Services
  - Synchronic (web services): New Interactive services:  
"Prescribed medication not available until yy:mm:dd.  
Would you like to change your Prescription?"

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