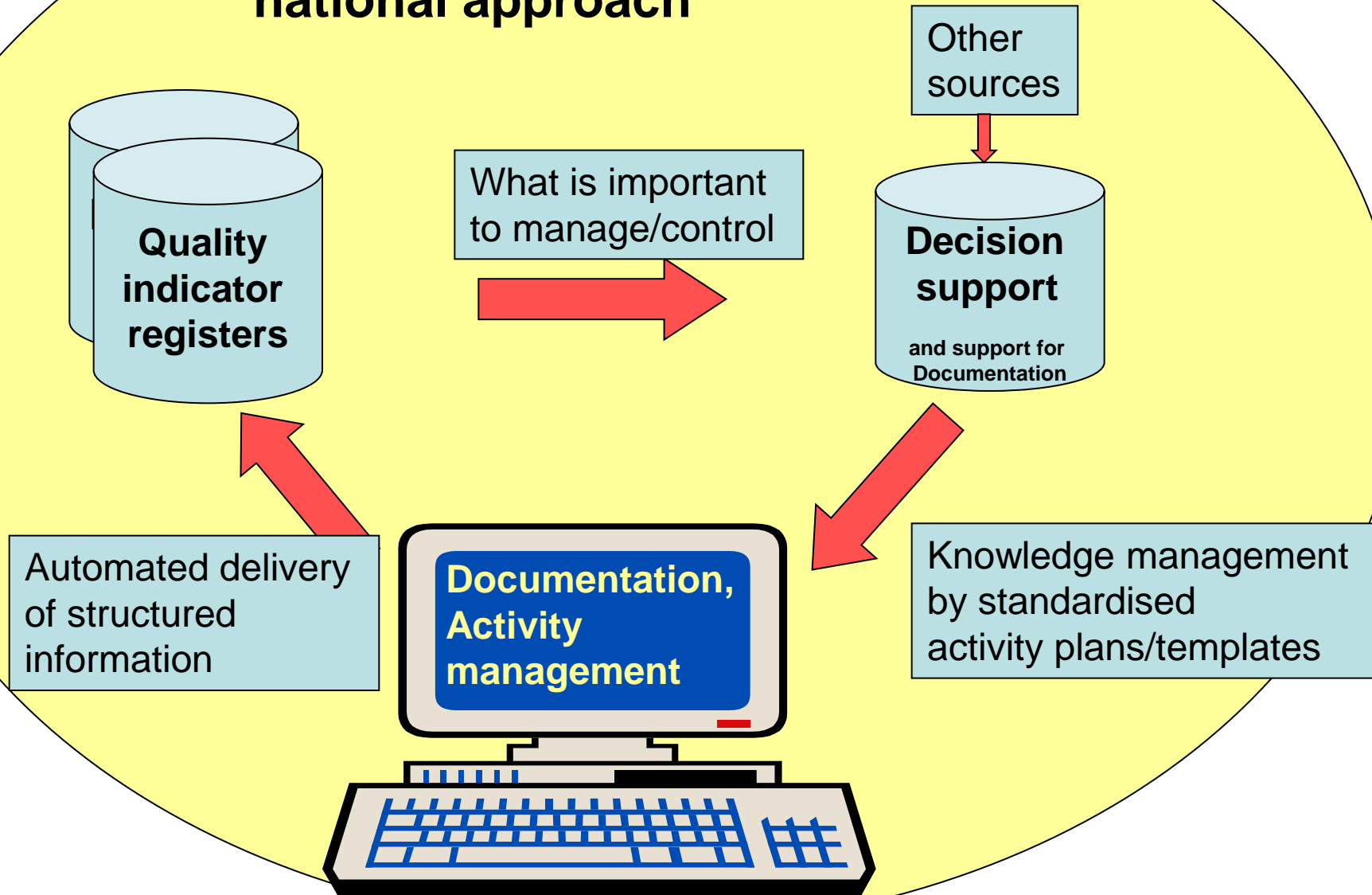


# The Swedish strategy and its relation to standards

Karl-Henrik Lundell

- Comprehensive clinical IT-support
- The 3-layer approach for e-health
- Relation to standards

# Comprehensive clinical IT-support based on a common 3-layer national approach



# Strategy for comprehensiveness

- 3 perspectives all based on explicit business models – give traceability and consistency to the ***clinical context***
- Reference information models with the clinical process in focus – health conditions, health care activities and the interaction between the patient and the professional – give traceability and consistency to the ***clinical content*** – (not only activity management, administration and flow)
- **Interoperable, structured data for the specific clinical processes** – based on process analysis (using the generic business models)
- **Documentation** of care provision, **follow up** and **knowledge process management** covered and connected in a seamless flow based on explicit generic business models and common explicit information reference models

## Generic Clinical level

Business analysis – clinical process focus  
Process- and Concept models in the National Information structure (NI)

Business rules

## Reference Information level

Generic information model (NI) and  
V-TIM

harmonisation

Archetypes/Templates;  
EN 13606 and  
openEHR reference  
Models (EHR and Demogr IM)

Reference archetypes  
Slot: non clinical attributes  
-----  
Slot: clinical attributes

ICF structure

SCT concept model  
attributes

Reference templates

## Applied Clinical level

ICD,  
ICF,  
code systems

Conceptual  
mapping to SCT

Process specific archetypes  
-Slot: nonclinical attributes  
-----  
- Slot: clinical attributes  
Pref. SCT code

Specific templates for e.g.  
National quality registers,  
knowledge management  
Documentation in EHR

# The Swedish 3-layer approach

1. Generic Clinical layer
  - Analysis of the core processes
  - Analysis of the information needs
  - Generic Process model
  - Generic Concept model; prEN 13940-2 harmonised
  
2. Reference Information layer
  - Generic information model and Applied information model (V-TIM); EN13606 and openEHR harmonised)
  - SNOMED CT concept model attributes
  - Reference archetypes (structure based on ICF and SNOMED CT)
  - Reference templates
  
3. Applied Clinical layer
  - Clinical process specific archetypes
  - Clinical process specific templates
  - Archetype specific terminology binding (SNOMED CT, ICD, ICF ...)

### ***Generic Clinical level***

- EN 12967 (HISA part 1 enterprise viewpoint)
- prEN 13940-2 (Contsys part 2 health care process and workflow)
- ISO/FDIS 21667 (Health indicators conceptual framework)
- ISO 9001 and CEN/TS 15224 (Quality management systems)

### ***Reference Information level***

- EN 12967-2 (HISA part 2 information viewpoint)
- EN 13606-2 (Electronic health record communication part 2: Archetype interchange specification)
- Open EHR RIM and specifications
- SNOMED CT concept model attributes
- prEN 13940-2 (Contsys part 2: health care process and workflow)
- ICF (WHO classification for disabilities and functions)

### ***Applied Clinical level***

- EN 13606-1 (Reference model for communication)
- EN 13606-4 (Electronic health record communication Part 4: Security)
- EN 13606-5 (Electronic health record communication Part 5: Interface specification)
- prEN 13940-2 (Contsys part 2: health care process and workflow)
- SNOMED CT, ICD, ICF ....

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## “The Swedish e-health approach”

- Contact

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