

16TH ITU ACADEMIC CONFERENCE

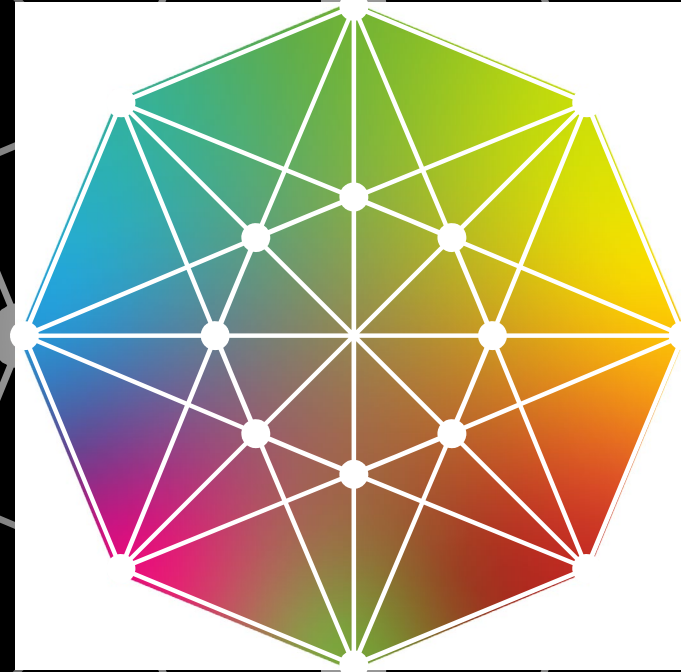
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*AI and frontier
technologies for good*

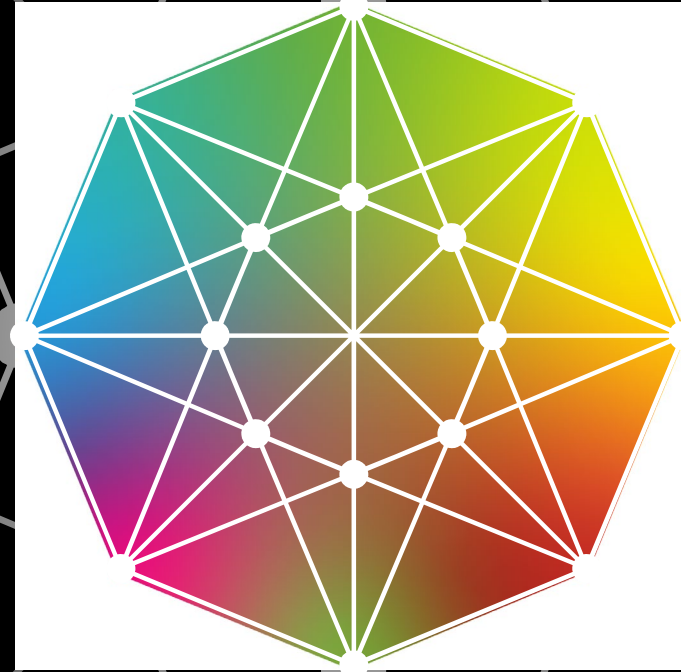
7-9 July 2026
Geneva, Switzerland

Hosted by  **AI for Good**
Global Summit



International approaches to scaling AI in healthcare: Balancing home-grown systems and commercial procurement

7th of July 2026





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Session #S3.5

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Background



**AI is rapidly entering
health service
delivery**



**But scaling remains
difficult**



**Sustainable AI
adoption depends on**

Infrastructure

Data Quality

Workflows

Organisational Culture

Governance



**Health systems face a
strategic question:**

***Build locally or buy
commercially?***

Research questions



How are health systems scaling AI while balancing commercial procurement and home-grown innovation?

- What pathways to scale emerge?
- What shapes these pathways?
- What tensions arise?

Methods



Comparative qualitative case studies



Four healthcare systems:
Catalonia, Norway,
Queensland, Singapore



42 interviews, 3 focus
groups, 61 policy documents



Technology, People,
Organisations, and Macro-
environment (TPOM)
framework

Different funding structures, different scaling pathways

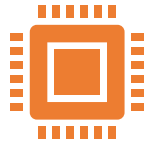
SETTING	MAIN RESOURCING MODEL	ACTIVITY STIMULATED IN THE HEALTH SYSTEM	IMPLICATIONS FOR SCALING
Singapore	National innovation funding + start-up ecosystem	Piloting of AI that is close to product at a regional level	Rapid innovation and experimentation
Norway	Core health system funding	Piloting of AI products at regional level	Stable, coordinated scaling
Catalonia	EU and regional public funding	Experimentation that is linked into the mature infrastructure	Research-driven innovation
Queensland	Mixed organisational and regional funding	Strong links with universities and localised experimentation	Flexible but fragmented scaling

Different systems adopted different AI scaling strategies



Approaches ranged from

“Bottom-up innovation, top-down orchestration” to federated “middle-out” governance



Some systems prioritised

Local experimentation and home-grown innovation
While others focused on coordinated commercial deployment



Needs-based approaches emphasised

Clinical co-design
Local validation
Interoperability
Equity



Common challenges included

Balancing coordination with local autonomy
Managing bias and representativeness
Scaling beyond pilots into routine care

AI scaling is constrained by the installed base

Setting	Installed base	Main implication
Singapore	Epic + national AI infrastructure	Coordinated scaling
Queensland	Statewide Cerner platform	Shared data but less flexibility
Norway	Mainly home-grown systems	Greater local control
Catalonia	openEHR + shared data spaces	Interoperable scaling

- EHR systems
- Data infrastructures
- Cloud environments
- Standards & interoperability
- Vendor ecosystems

Commercial and home-grown AI follow different scaling pathways

Home-grown pathways

- Locally developed innovation
- Tailored to local needs
- Supports innovation ecosystems
- Promotes data sovereignty and control
- Challenging to sustain beyond pilots
- Requires clinical ownership and coordination

Commercial pathways

- Rapid deployment
- Standardised solutions
- Supplier expertise
- Local validation required
- Vendor dependency risks
- Better integration and scalability
- May not always fit local contexts

Scaling challenges



Moving from prototype to deployment at scale



Sustaining AI products beyond pilot funding



Integrating with existing digital infrastructures



Building technical, regulatory, and procurement expertise



Balancing local innovation with standardisation



Supporting domestic AI ecosystems while preserving competition



Avoiding vendor lock-in and maintaining strategic flexibility

Emerging pathways to scaling AI



- Scaling pathways varied by
 - Degree of coordination
 - Commercial vs home-grown focus
- Approaches ranged from
 - Centralised standardization (top-down)
 - To distributed local innovation (bottom-up)
 - Trade-offs of both
- Mixed and hybrid models were common
- Pathways reflected differences in
 - Governance
 - Funding
 - Digital infrastructure
- Ecosystem view, no single optimal pathway

Implications for practice



Institutional and technological arrangements for deployment at scale of AI still in embryonic stage



Installed base shapes future scaling pathways



Mixed portfolios likely required

Commercial + home-grown AI



Commercial and home-grown AI follow different scaling pathways



Procurement increasingly strategic

Transparency; data ownership; vendor lock-in

Conclusions



Commercial and home-grown AI follow different scaling pathways



Pathways shaped by governance, funding, installed base, digital maturity



No single optimal pathway emerged



AI scaling is

Sociotechnical
Infrastructural
Governance-dependent

Thank you!

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