Breaking down the data silos

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Health systems/organisations are investing to break down the data siloes and become smarter for tomorrow.

Continue to optimize the business of today

Duality of growth

Innovate and grow the Business of tomorrow

Smart Health Ecosystem
Integrated patient centric care that breaks down silos between care settings

Connected Health provider

Traditional Health provider

Digitized Health provider

► Data driven
► Platform enabled / technology driven / open
► Seamless integration of physical and virtual
► Preventative and predictive care

► Facility centric
► Connected digital systems for point to point interactions

► Some technology enabled solutions
► Some integration

► Paper processes
► Some standalone IT infrastructure

Source: Frost & Sullivan, Healthcare IT News, Mordor Intelligence

Smart Health Ecosystem
Integrated patient centric care that breaks down silos between care settings
Data flow will transform care delivery towards a hyperconnected health management network.
Health platforms with different focus areas

**Customer:** providing a seamless customer journey matching the individual preferences of customers

**Data intelligence:** adding a layer of intelligence based on the aggregation of data from a myriad of sources

**Connected things:** supporting the real time collection and processing of sensor input from connected things

**Shared care:** supporting the seamless collaboration between care professionals from different organizations

**Point to point:** supporting the exchange of selected patient data from one professional to the next

**Care provider:** supporting the integration between the ecosystem partners and the core systems of the individual care provider
Hyperconnected care networks are enabled by interconnected platforms

“While a closed system is possible for individual product systems, it is often impractical for systems of systems. ... Over time, closed approaches become more challenging as technology spreads and customers resist limits on choice.

Health ecosystems are confronted with different demand patterns

- Low predictability, low complexity: Covid-19
- Low predictability, high complexity: Parkinson + heart failure + COPD
- High predictability, high complexity: Benign brain tumor
- High predictability, low complexity: Hip replacement
... these demand patterns are driving different solutions

**Low Complexity**

**Focus: health status and indicators**
Communication: Pull, Selected dataset

Typical electronical solutions:
- Disease oriented personal health record
- Shared provider record/index
- Focused control room
- Smart alerts/ limited number of parameters

**Focus: shared problem exploration & monitoring**
Communication: Pull, Maximal dataset

Typical electronical solutions:
- Generic personal health record
- Shared health record for providers
- Integrated control room
- Collaboration tools
- Alerts and insights/ complex clinical rules

**Focus: handover**
Communication: Push, Minimal dataset

Typical electronical solutions:
- Patient portal per provider
- Digital transfer platform (document based)
- Provider portal for ordering/results
- Cross enterprise pathways

**Focus: orchestration**
Communication: Push, Selected dataset

Typical electronical solutions:
- Persona oriented personal health record
- Shared intake
- Case management
- Cross enterprise protocols
There are too many different initiatives running in parallel within the FHIR community. These rapid evolvements not only lead to inefficient use of resources within the developer community, it also risks leading to different “dialects” being created by the different projects. This in turn will make it confusing for users to understand the best specifications and requirements for their user environment.

Source: COCIR, the European Coordination Committee of the Radiological, Electromedical and Healthcare IT Industry, “Interoperability out-of-the-box? assessing FHIR, June 2021
1. Separate the data from the logic, break down data silo's
2. Think in platforms and how they serve future demand
3. Develop a partnering strategy and capability
4. Create a data sharing framework across all levels: organization, process, information, data, infrastructure
5. Focus on sharing discrete, machine readable, data
6. Use a common data model
7. Choose modern open standards like openEHR, FHIR & Oauth and prevent local deviations
8. Prepare for handling very large volumes of data
9. Integrating legacy data sources is difficult but necessary
10. Share knowledge, experience and solutions around data integration (e.g. modelling community, open source)
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