



From Catharina to Networked care

The team



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Understanding of the case : Perceived problems

Inefficient Patient Information management:
Patient perspective: long wait times and confusion in administrative procedures

Siloed departments: multiple organizational layers and top-down communication slow down decision-making.

Resistance to change causing adaptability issues: new technologies are difficult to implement





Understanding of the case : Insights

Empower employees by allowing dynamic collaborations.

Expansion from physical to hybrid (digitally supported)

Find the intermediate steps to transform the hospital into network structure

Incorporate new forms of digital collaboration into the hospital

Understanding of the case: Network structures

Advantages



Autonomy



Faster decision-making



Easier problem-solving

Disadvantages



Dependence on partners



Quality control



Contract Management

How might we

gradually streamline various nodes to have more governance and increase efficiency in communication and reliability towards patients?



Approach exploration

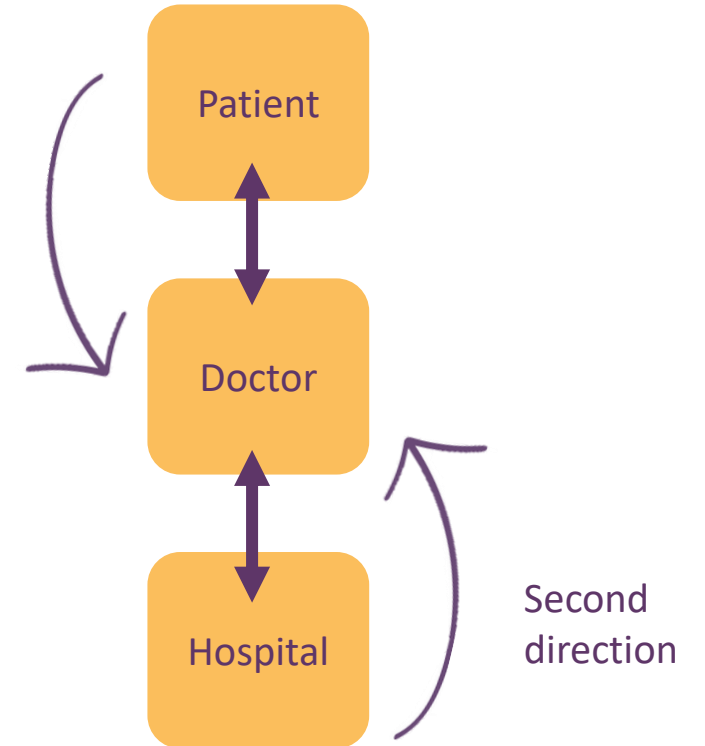
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Patient-centred approach to improve reliability

- Incorporate Citizen Care approach
- Build UX research team to collect valuable insights from patients
- Waterfall development



First direction



2

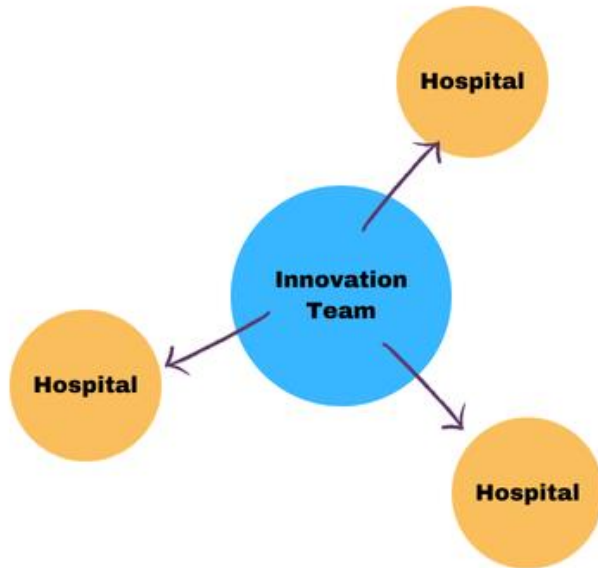
Internal innovation to improve efficiency in communication

- Build up an internal innovation team
- Play as the joint between hospitals
- Agile development process



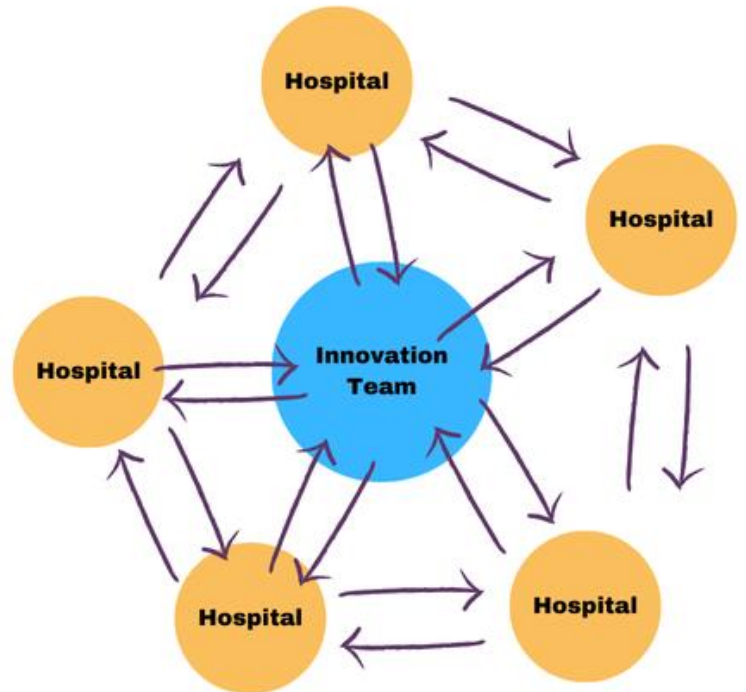
Intermediate steps: Development plan

Horizon 1



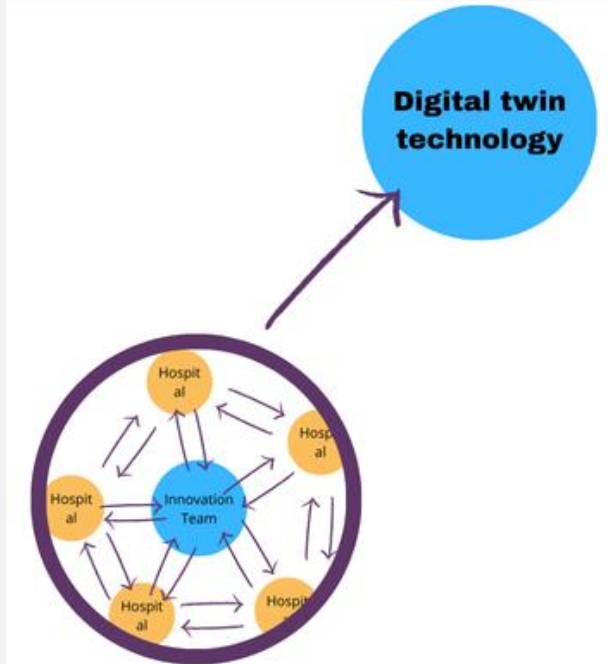
Finding out current communication problems and implement small-scale pilots

Horizon 2



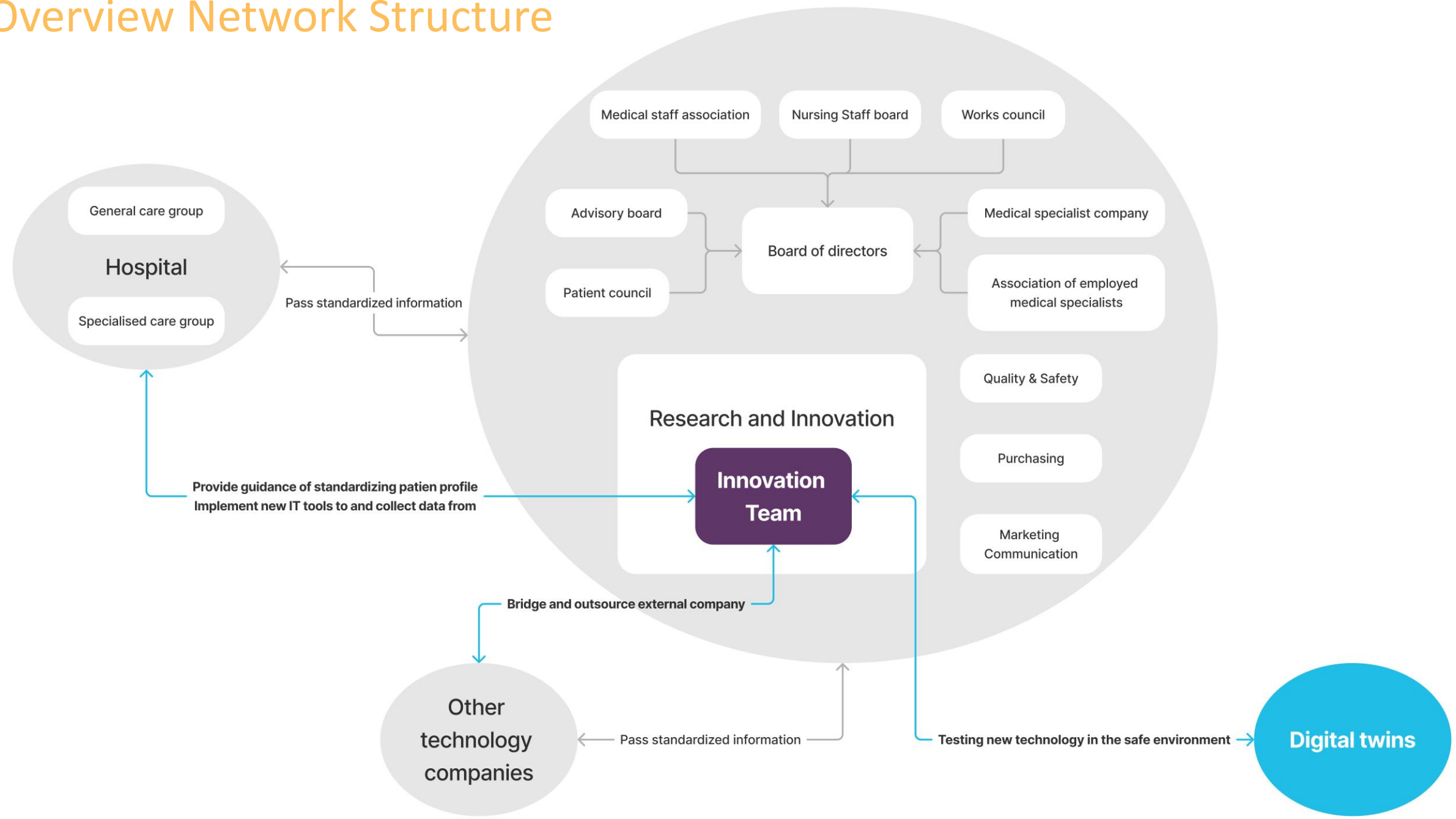
Play as central hub

Horizon 3



Integration of digital twins, more streamlined communication and safe pilot possibilities

Overview Network Structure



Opportunities:

- Low threshold for kick off team
- Forms a bridge between hospitals and tech development
- Better medical care as it is patient-specialised

Limitations:

- More parties involved
- No direct return of investment
- Difficulty in scaling





Quick recap: from problem to solution

- Innovation team as a glue

Innovation team plays as a glue to connect hospital, and gradually builds up efficient communication, and then creates reliability towards patient in the future.

- How we fit our shared value into the case

Pragmatic with a holistic perspective as we are considering various stakeholders including patient care.

Reflection on teamwork



Strengths

- **Active Reflexivity**

Reflecting positively on each rubric from the last assignment has ensured our thoroughness and completeness in this one.

- **Open and Positive Mindset for Exploration**

We explore both approaches at the same time, keeping possibilities open for the end.



Areas for improvement

- **Increase cooperation between roles**

After dividing up the specific tasks of the team, there may be some lack of cooperation and communication between the different roles.

- **Include client/case owner more**

We can apply more client or case specific information to our approaches, or refer to them more.

Thank you.

Appendix

Understanding of the case : Perceived problems

Hospital acts as own company

- Low efficiency of arranging patient's information
 - Patient perspective: wasting time/confusion of the procedure
 - Doctor view: studying as doctor but end up as an accountant
- Too many layers in the organization that delay the decision-making process – Siloed Departments with top down communication
 - Administrative problem slow down the the process of innovation
- New technologies are there, but hard to include in the hospital due to resistance to change leading to adaptability issues





Understanding of the case : Goals

- Find the intermediate steps to transform the hospital into network structure
- Incorporate technology into hospital
- The goal of becoming a network org, and operate as the Brian port area
- Expansion to hybrid structure in the future

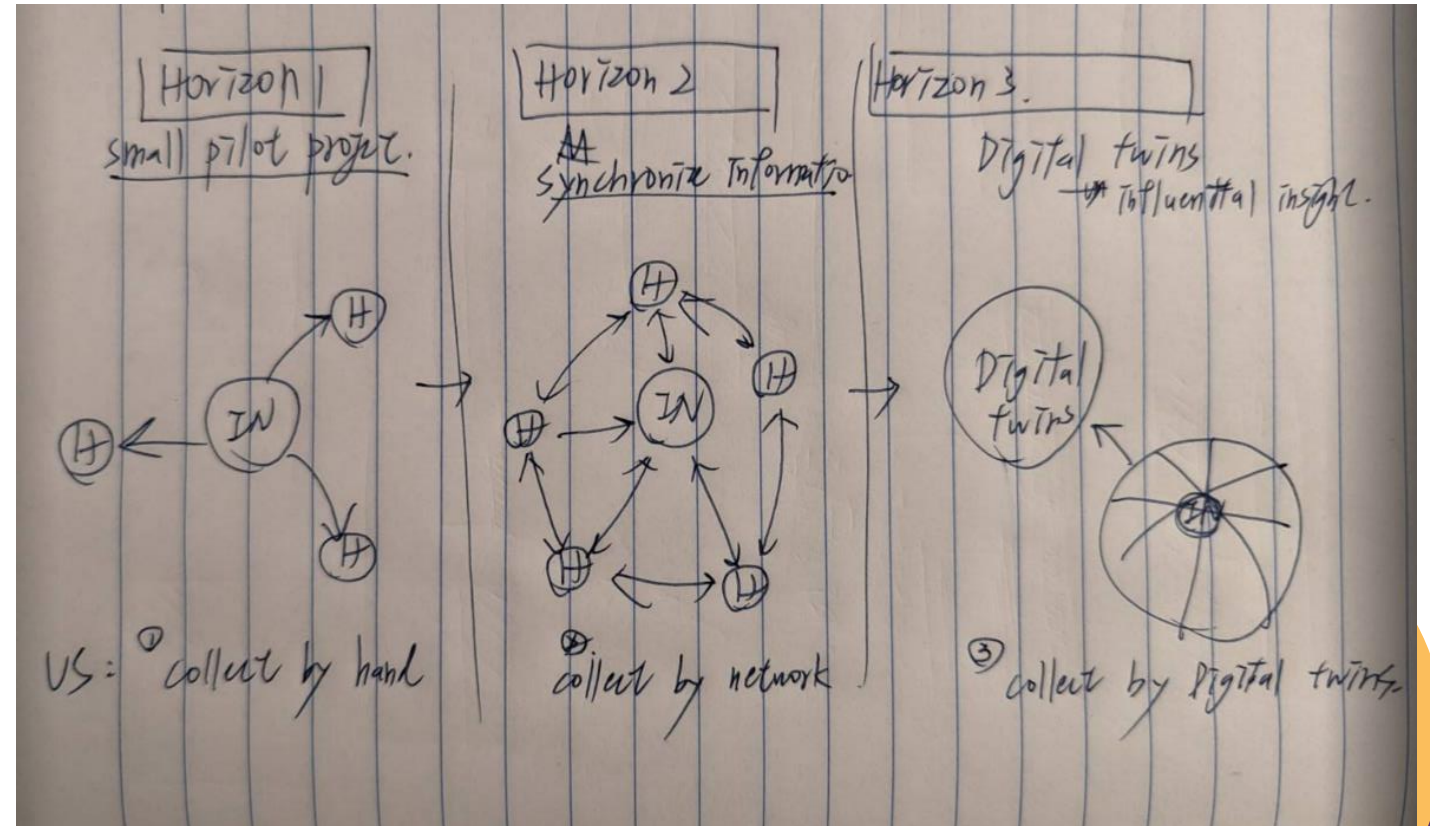
- Conduct regular interdisciplinary meetings and case reviews to share knowledge and insights.
- Implement small-scale pilots in a few hospitals to assess the impact of new communication tools or care protocols.
- Digital twins enable precise simulations and predictive analytics, improving decision-making and operational efficiency. Coupled with modern communication platforms, these technologies foster a collaborative environment where clinical and administrative staff can work together seamlessly, ultimately leading to better patient outcomes and more efficient hospital management

More information innovation team

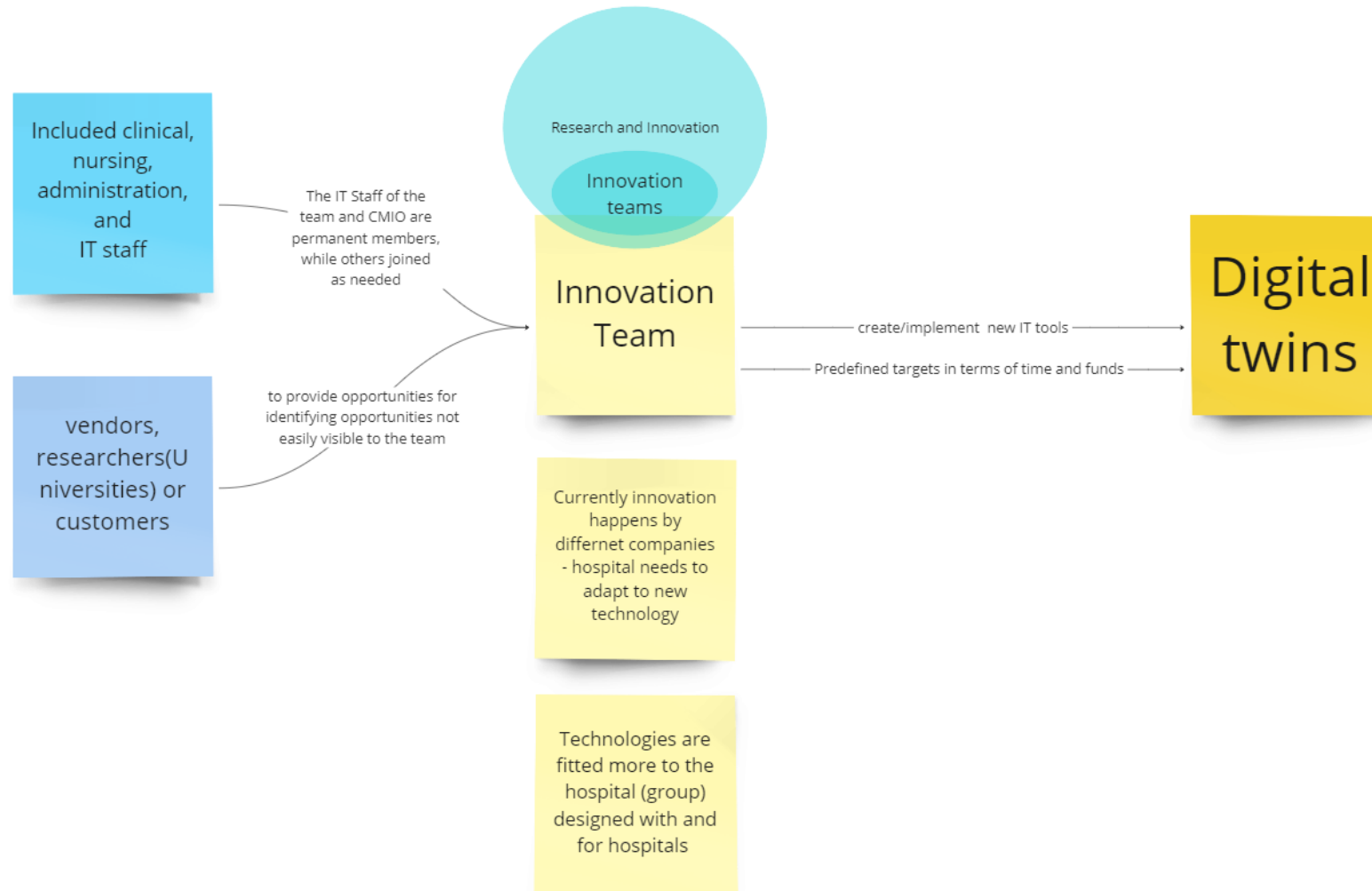
- The innovation team works in a designerly way. They will work in an agile manner, focusing not only on how a hospital operates their information flow, but also on patients and doctors working in the hospital. By introducing small agile innovation sprints, the team can highlight, tackle problems, or co-design with doctors for new innovations.
- By having a team that is rooted in the network, they have easy access to all resources needed, from patients to hospital information to doctors; they are all accessible.

Intermediate steps: XX direction

- Horizon 1
 - Kick off innovation team, **finding out current communication problems** in doctor's view for hospitals
 - **Implement small-scale pilots** in a few hospitals to assess the impact of new communication tools or care protocols.
- Horizon 2
 - **Play as central hub** and actively synchronize resource from hospital and use it in mid-term projects
- Horizon 3
 - **Digital twins** enable precise simulations and predictive analytics, improving decision-making and operational efficiency. Coupled with modern communication platforms, these technologies foster a collaborative environment where clinical and administrative staff can work together seamlessly, ultimately leading to better patient outcomes and more efficient hospital management
 - **Before testing the real case, we have a safe environment to have pilot study**



Initial idea of integrating innovation team



Network Organizational Structures

Advantage

Focus on Core Competency: Organizations can concentrate on their primary strengths and expertise by outsourcing peripheral operations. This allows them to allocate resources effectively towards enhancing their unique value proposition and gaining a competitive edge.

Cost Savings: Significant cost reductions are achieved by outsourcing non-core functions. This approach decreases the need for investments in infrastructure, staff, and technology, leading to lower operational costs and higher profitability, which can be reinvested in growth initiatives.

Flexibility: The network structure provides exceptional flexibility, allowing organizations to quickly adapt to market changes. Businesses can modify their network of partnerships to seize new opportunities or address challenges, ensuring they remain agile and responsive.

Access to Talent: Outsourcing enables access to a global talent pool, allowing businesses to engage top-notch skills and expertise from around the world. This is particularly beneficial for areas requiring specialized knowledge or technical skills that may not be available in-house.

Speedy Decision-Making: With fewer management layers and clear role delineation, decision-making processes are faster and more efficient. The autonomy within each network node facilitates quick problem resolution, enhancing the organization's ability to respond promptly to market demands (BoardMix) (Advergize) (Visible Network Labs)

Disadvantage

Dependence on Partners: Organizations become highly reliant on their partners. If a partner fails to meet standards or timelines, it can disrupt the entire operation and damage the organization's reputation.

Quality Control: Maintaining consistent quality across various partners can be challenging. Each partner operates autonomously, which can lead to inconsistencies in the final product or service, affecting customer satisfaction.

Lack of Direct Control: Limited control over outsourced operations can lead to challenges if partners' practices do not align with the organization's standards. Enforcing performance expectations can be difficult, especially across different legal jurisdictions.

Potential Communication Issues: Despite advanced communication technologies, issues may arise due to differences in time zones, languages, or cultural nuances. Miscommunication can lead to errors and inefficiencies.

Complex Contract Management: Managing multiple contracts with various partners is complex and time-consuming. Each contract has unique terms, performance metrics, and compliance requirements, which can strain organizational resources

Steps to Become a More Networked Organization

Using the Three Horizons of Growth framework, Catarina Hospital can take the following steps to become a more networked organization:

Horizon 1: Optimize Current Operations

- Strengthen Internal Capabilities: Enhance internal systems and train staff on collaborative technologies.

☀️ Standardize Procedures: Ensure consistency in clinical and administrative processes and use data analytics to identify areas for improvement.

- Build Initial Partnerships: Collaborate with Eindhoven hospitals to share best practices and resources.

Horizon 2: Explore New Opportunities

- Formalize Regional Collaboration: Establish formal agreements with hospitals in the

☀️ region and create joint committees for oversight.

- Pilot Collaborative Projects: Initiate projects in telemedicine and shared research to

☀️ evaluate and refine collaborative approaches.

- Leverage Technology: Invest in interoperable health information systems and telehealth platforms.

☀️ Horizon 3: Create Breakthrough Innovations

- Expand Network to Brainport Region: Gradually include more hospitals and healthcare providers from the Brainport region.

- Innovate Healthcare Delivery Models: Implement value-based care models and develop specialized centers of excellence.

- Research and Development: Collaborate on large-scale research projects and apply for funding to support innovative healthcare initiatives.

- Patient-Centered Care Innovations: Use patient feedback and data analytics to improve care delivery and patient engagement.



Hospital leadership in support of Digital Transformation



Evolving customer expectations and the rapid introduction of new information technologies are influencing business operations, and businesses need to transform themselves with new operating models to remain competitive. The traditional top-down administrative leadership approach is not sufficiently flexible to support the innovation needed to sustain customer engagement and retention. There is a need for both **an enabling leadership that supports the exploration of innovative ideas quickly for viability and an adaptive leadership to transition the ideas that show promise into the current business model or a variation of this model to sustain growth.**

We define digital leadership as a strategic process that collectively uses these three leadership styles to create an ecosystem that advances a culture of innovation within organizations.

This leadership process uses four foundational platforms to support business transformations:

(1) An innovation platform to empower teams to explore ideas that create value using digital transformations;

(2) An agile system and business platform to quickly design and deliver IT implementations;

(3) A learning platform to support reflective discourse that leads to organizational capacity building; and

(4) An adoption platform to decide when and what implementations get transitioned to the regular business for sustaining competitiveness. We will illustrate how digital leadership is used to transform the culture of a community hospital through several IS implementations recognized by external peers for their innovativeness.

Enabling Leadership to Support Exploration

The team, by virtue of the unique activities and structure of the hospital, included staff from clinical, administrative, and IT. To complement internal resources, the team also used external partners as needed in support a number of digital transformations. The leadership roles were played by the CEO, CMIO (chief medical informatics officer), and CIO (called the IT Director within the organization), with IT and clinical staff playing various supporting roles as needed. For each transformation, the team was empowered to use an established budget to support the effort without approval delays from the corporate administration (Trinity) **While through the entire cycle: innovation exploration to evaluate digital transformation effort in the early phases, the CEO entered the picture when post-implementation evaluation required process and policy level changes, as well as during discussions required to bridge differences among vendor technologies as they attempted to work together to streamline communication and data sharing**

Adoption platform: Bridging enabling and administrative leadership

While enabling leadership uses innovation teams and agile system and business platforms to support the exploration of new ideas that can support digital transformations, adaptive leadership relies on reflection and learnings to decide how best to move viable explorations into the organizational routines of the regular business. When explorations are occurring at a faster speed, the adoption must occur independently of the exploration and evaluation.

Using IT to drive down costs and improve quality

a decision support tool for a clinical unit (radiology)

tools to speed the flow of patients in emergency departments and support a computerized physician order entry system (CPOE)

the Cerner electronic health record (EHR) system to track diagnoses, treatment processes, and patient record keeping. RSVP stands for the Remote Specialist Visiting Physicians program and was designed to support continuity of care for high-risk patients using a mix of technology and care coordinators inside and outside the hospital.

External care coordinators recruited from the local fire department—emergency medical technicians (EMTs)—visited patients as a follow-up and engaged in a two-way consultation with physicians using video conferencing technology (e.g. SwyMed Telemedicine).

Formation of Innovation Teams in SJMO

Business Elements	Specific to Case Study	Application to a broader context	Idea extension
Team Membership	Included clinical, nursing, administration, and IT staff	Membership in the team is drawn from key disciplines involved in the digital transformation	Membership can extend to key individuals outside the organization, such as vendors, researchers, or customers
	The IT Staff of the Business Intelligence team and CMIO are permanent members, while others joined as needed	Varies from transformation to transformation, even though a few key individuals may remain to keep organizational summary	Extending to key researchers or institutional partners may provide opportunities for identifying opportunities not easily visible to the team
Leadership Roles	Leadership roles varied from project to project, allowing the right leader to direct the transformation, but a few leaders remained as a part of the team (CMIO and CIO)	While roles can vary, a select group of leaders from specific levels should be used for consistency and to help build cross-leadership competencies, and potentially help build leadership training for digital transformation	In select cases, leadership for transformation may be provided by an external entity, such as a technology leader for a new application or business leader with demonstrated competency
Empowerment of Teams	Predefined targets in terms of time and funding allowed the team leader to pursue their goals unimpeded by bureaucracy and seek outside resources as needed.	Soliciting ideas for exploration and setting budgets for exploration is not effective, entrepreneurially speaking. However, providing budget or time constraints earlier might empower teams to seek ideas worth exploring and be creative in seeking a mix of resources, internal or external, to assess their viability.	Use of external partners (vendors) or researchers (universities) in the team might give more avenues for idea generation as well as resources to support exploration

Building Systems and Business Platform in Support of Agility in SJMO

Business	Elements Specific to the Case	Application to a broader context
Modularity in Application	These systems (Cases 1A and 1) are fairly self-contained, while the dashboard and ICS had built application modularity around customers (clinical units and patient room services).	While the nature of transformation may dictate the opportunity for modularity, viewing digital transformation from a customer services perspective might provide opportunities for modularization. Examples here include a digital transformation to support customer awareness, decision-making, purchase (or receipt), and engagement post-sale (post-receipt).
Agility in Architecture	All systems developed have separated data from applications, and new applications from current applications. They used distributed architecture, segmented applications, and supported use coupling of individual systems (dashboard and ICS).	Distributed or federated architectures are often used to support agility by separating new from current systems. Cloud-based architectures, software-as-a-service vendor technology, and sourcing of certain key communication and coordination systems can all help agility in explorations without modifying significantly the current architecture.
Modularity in Value Assessment	These systems have distinct value on which to assess innovations. Dashboard and ICS have their values defined by the metrics—clinical unit operations and patient care services.	Aligning digital transformation around services delivered to a customer (internal or external) can help evaluate systems based on the value they create incrementally and mitigate risk in their implementation. Use of vendor software in digital transformation may let technology options of the software help modular value assessment of services the options supported.
Agility in the use of external resources	The case uses many external vendors in support of digital transformation and speed up transformation effort. Use of other university resources helped supplement minimally staffed IT resources.	Organizations have experience in using external technology vendors and need to leverage this experience in digital transformations. The focus today, however, is on the use of digital "new" careers whose longevity is always in doubt, and leveraging such vendors as partners needs a "lean-start-up" mindset—shorter transformation efforts, low investment early on, frequent customer feedback, and flexible delivery on focused outcomes.
Flexible governance	The leadership used a number of decision making approaches. Diligent evaluation in early warning systems, make as few changes in policies and technologies in exploring ICS, early use of external resources to path data to data integration for dashboard implementation	Empowered teams need flexibility in decision making and vendor relationships/partnerships. In addition, the empowered teams need to do several proscriptivity adjustments to assess operational changes, or value metrics (monetary, learning, relationship building, etc.) to assess viability. Focusing on commercial viability alone, when digital transformations occur frequently, deflates the purpose of creating an ecosystem that supports a culture of innovation and building organizational capacity

Sources

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