

The image features a dark blue background on the left containing the Philips logo in white, the word 'Healthcare' in white, and 'Consulting' in white on a dark blue rectangular background. To the right is a photograph of a modern hospital building at dusk. The building has a prominent glass tower with multiple floors, and the interior lights are on, making the tower glow. The rest of the building is dark with some lit windows. There are some trees and a sign that says 'COMMUNITY HOSPITAL' in the foreground.

PHILIPS

Healthcare

Consulting

Healthcare Transformation Services: **revitalizing the vision of compassionate care**

Who/where

A large regional health network in the Northeast region of the United States is expanding to contain two near-by hospitals with different histories and backgrounds. Aiming to revitalize its mission while honoring its legacy of providing quality and compassionate healthcare to the members of its local community and clinical education to its staff, the network is strategically consolidating its two community hospitals into one modernized Healthcare Campus to better serve future generations.

Challenge

Our Healthcare Transformation Services (HTS) team was tasked with creating a cost-effective master plan for a new Healthcare Campus that would help the hospital system win back market share, achieve sustainable growth and be flexible to meet future demands and demographic trends. The challenge was to unite two hospitals into a 21st century model of first-class care delivery and reestablish the hospital system as an anchor to the community.

Solution

Our healthcare consultants made a thorough analysis of market needs, competitors and technology trends such as telehealth, and gathered deep insights into the current state staff and patient experience. The resulting design proposal recommended the construction of a new 170,000 sq ft facility and renovation of existing facilities to create 201 single-bed patient rooms, a new emergency department, and update other departments located in proximity to each other for efficiency.

Results

The new design has a specific focus on inter-departmental efficiency and areas that celebrate nature to provide a positive and comfortable environment for staff, patients and visitors. Our team managed to incorporate 201 single-bed rooms compared to 90 in the architect's plans with a cost per square foot 20% lower than the original design. The proposed designs resulted in 50% fewer construction phases, compared to the original architect's plan, which reduces disruption from construction activities as well as construction times and costs. We achieved this by looking at a 10–20 year time span with fewer but bigger moves.

Revitalizing the compassionate care vision

A well-respected community hospital in the Northeast region of the United States was, in part, founded by a religious order in the early 20th century. Their mission was to provide quality and compassionate healthcare that improved the physical, psychological and spiritual well-being of the members of its community. Clinical education was also a fundamental driver of their organization. After over a hundred years of hard work, their efforts have resulted in a remarkable legacy of essential healthcare programs and services that are greatly appreciated by its community. In the past decade, changes in the healthcare system have greatly changed the hospital as several initiatives were taken to reduce duplicate services in the region. Most recently, the hospital has become part of a large regional health network which recognized the need to renew the hospital's strategic focus and modernize its facilities so it can continue to serve the present and future healthcare needs of the people in its region.

The regional health network was interested in consolidating this hospital and another community hospital, already in the network, into a single, full-service Healthcare campus. Philips Healthcare Transformation Services was asked to evaluate this approach and create an overall enterprise campus master plan that would support long-term growth and offer flexibility in meeting new needs and challenges.

This concept aims to:

- Unify two hospitals into a singular, strengthened brand that honors both the original, religious institution and the new hospital ownership.
- Deliver an exceptional patient care experience by introducing key amenities such as single-bed rooms throughout the hospital.
- Streamline clinical workflows and patient travel by

evaluating placement of complementary departments.

- Incorporate innovative technologies, such as telehealth connectivity, to support future personalized care services.
- Reduce the time and effort of realizing a new Health Campus that makes efficient use of space and has lower long-term costs.

The Philips difference

Our Healthcare Transformation consultants look beyond the bricks and mortar to envision an ideal patient and staff experience that is valuable for all stakeholders.

- **Data Analytics:** We collect quantitative and qualitative data to establish the “as is” situation, identify gaps and opportunities, forecast key trends and define requirements.
- **Design Thinking for Healthcare:** Our expertise in clinical workflows and staff and patient needs helps us design novel and value-driven environments and experiences for healthcare facilities.
- **Co-creation:** By involving all stakeholders in the process, we create richer concepts and streamline the acceptance and implementation process.
- **Best Practices:** We measure and evaluate recommendations against best practices from our vast network of global clinical partners and projects, as well as our significant body of scientific studies from Philips Research.

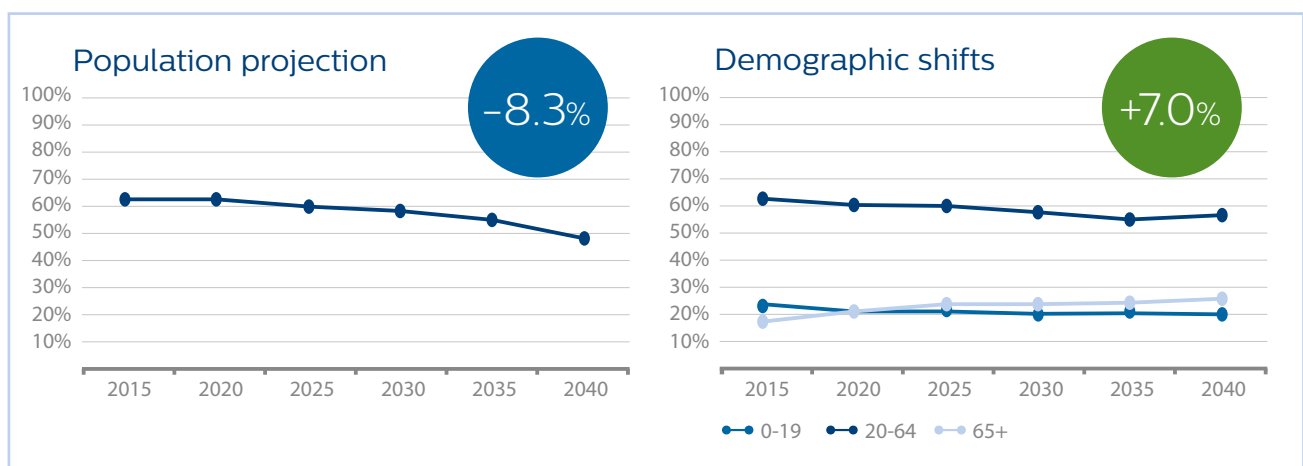


Figure 1: The left figure shows a projected decline in the overall population for the county of 8.3%, while the right figure shows that the number of people aged over 65 is projected to increase by 7% over the same period¹.

1 Cornell University Program on Applied Demographics, 2015

Market assessment

To get a clear view of the services required and patient volumes anticipated for the new full-service medical facility, our consultants and data analysts began the assignment by making a thorough analysis of the community’s future needs, the current market situation and perceptions about the current hospital services.

Population and demographic trends

Information about projected population numbers and demographic shifts from 2015-2040 for the hospital county was collected and analyzed to determine future patient volumes and service requirements.

Out of this analysis came two key conclusions. The population projections for the county show a forecast reduction in the total population of 8.3% between 2015 and 2040. Over the same period, the number of people aged 65+ is expected to increase by 7.0%¹.

Market and competitor assessment

Research on key patient segments, market characteristics, volume trends and projections was also carried out to determine the type and volume of medical specialties required to serve future patient groups. This research helped the project team identify current strengths and areas for improvement in the hospital’s existing services.

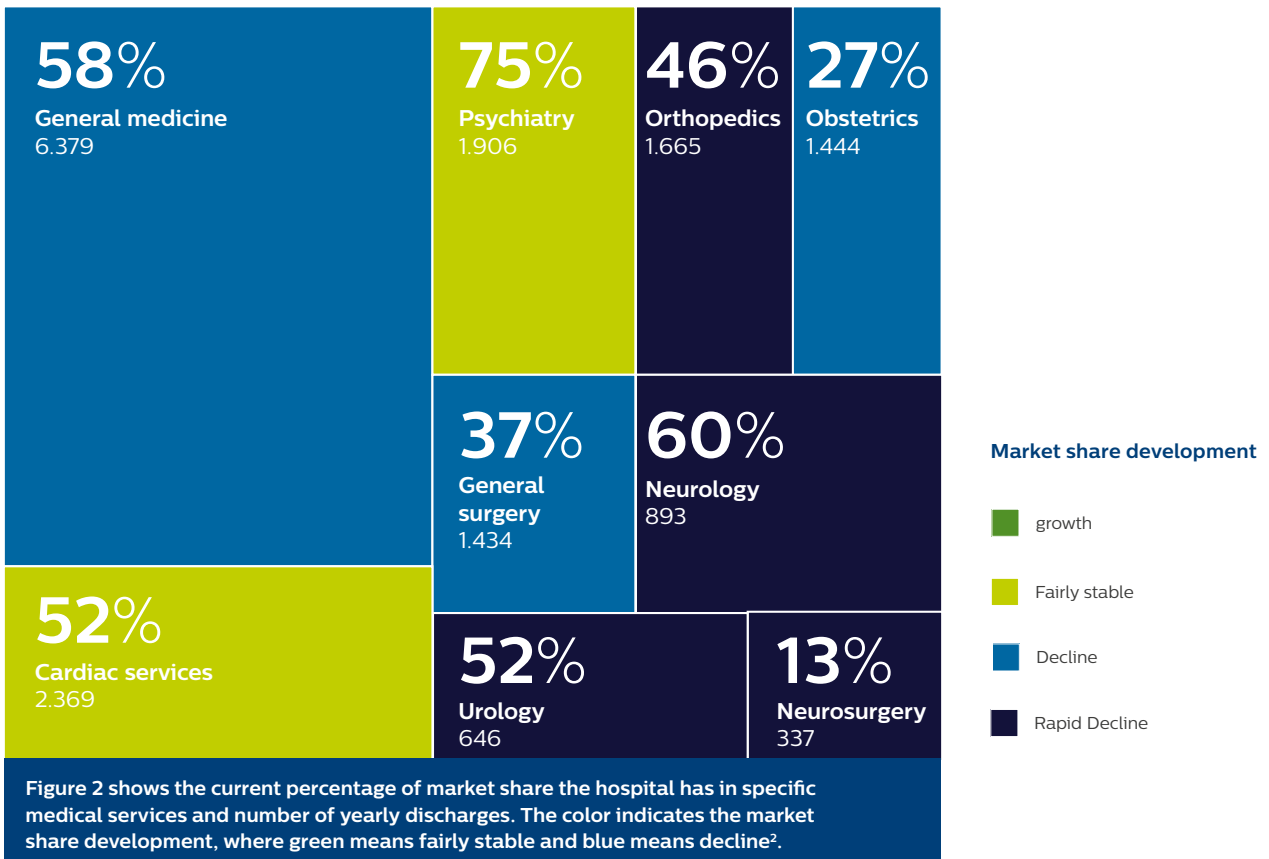
The data² confirms that the hospital is one of the larger facilities in the area and still has a large market share in many service lines due to its well-established presence in the community. However, newer, smaller and more specialized centers are taking some market share. An innovative full-service Health Campus could guard and maintain the new hospital’s market position.

Community perception

Before defining the way forward for the Healthcare Campus, it was vital to obtain an objective understanding of how the hospital was perceived by its community – patients, visitors and staff. To do this, our consultants collected and analyzed information from national and local surveys, and interviewed and observed staff and patients at the hospital.

The HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems) survey is the standardized, publicly reported survey of patients’ perspectives of hospital care, which has been carried out in the US since 2006. It is a survey instrument and data collection methodology for measuring patients’ perceptions of their hospital experience.

The HCAHPS scores for this hospital were very good, with 76% of patients saying they would strongly recommend the hospital.



² New York State Department of Health Statewide Planning and Research Cooperative System (SPARCS)



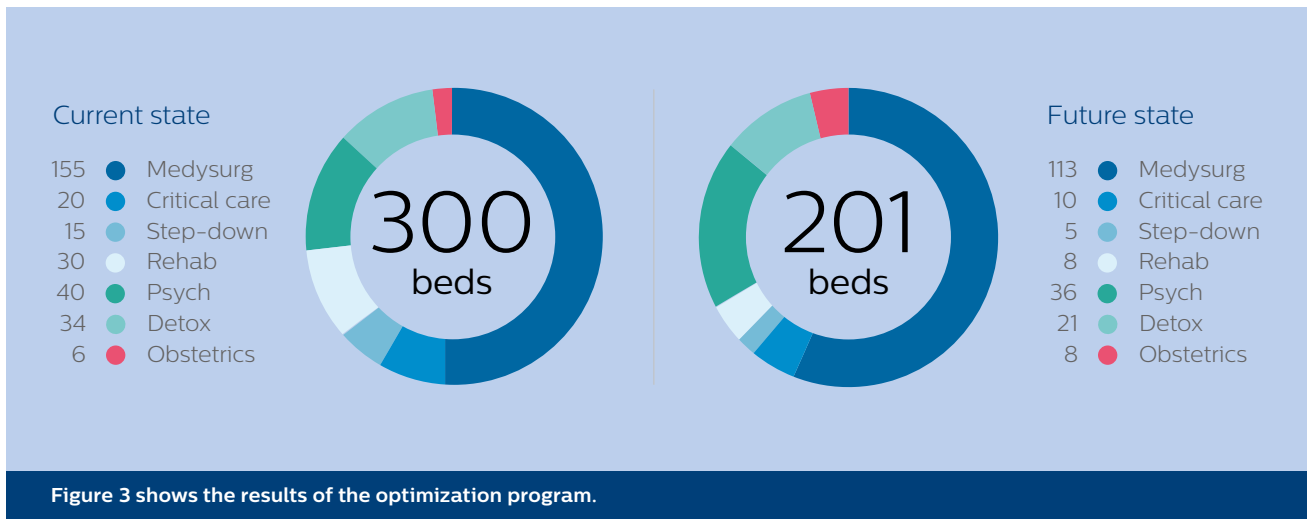
Staff insights

Feedback from staff surveys and interviews was analyzed to gain insights into how staff value the hospital and its working environment. These efforts resulted in two clear strengths that could be leveraged for the new Health Campus:

- **Serving their community** – 75% of staff live in the local area because of strong ties with their family, friends and community and 55% of staff have worked 11+ years at the hospital. Pride in serving their community is an important driver for staff satisfaction.
- **Education** – survey results indicate that 66% of staff rate the hospital as providing good continuing education opportunities.

Based on the full market assessment it was clear that the unified Healthcare Campus should develop a growth strategy that builds on its high satisfaction scores as well as its historical connection to the community to counter the loss of marketshare. Our consultants worked with the client project team to develop a vision to support the creation of a unified Healthcare Campus.

“ Establish a visionary roadmap to facilitate the united delivery of innovative, high-quality, compassionate healthcare that inspires staff, instills trust in the community, and honors a rich heritage.”





Optimization program

Our team then used the projected patient volumes and bed demand models to calculate the campus requirements and overall architectural program. The overall number of beds from the original plan was reduced by about one third by right-sizing departments based on growth projections, planned transfer of outpatient services, and new service lines such as telehealth.

New designs

Initially, the hospital board had planned to make many smaller incremental changes to the existing building to realize the Health Campus, and an architect had made a proposal for this. However, in discussions with the hospital stakeholders it became clear that there were drawbacks to this approach.

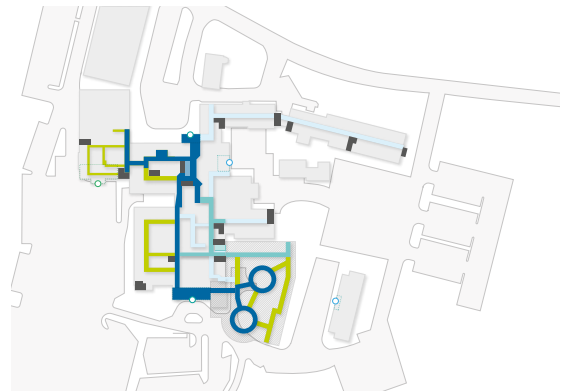
- Many compromises would have to be made in the envisioned concept to keep the changes small and in the end this may hamper optimal collaboration and patient handling between departments.
- It would not be possible to realize 100% single-bed rooms to provide a world class patient experience, which was a key goal for the project.
- Each incremental improvement would involve construction work, meaning the hospital would look and feel like a building site for decades.

Together with the project team our team of designers, clinicians and architects set out to make an alternative plan that would support the hospital in achieving their vision – in fewer, larger steps.

Streamlining workflow

By placing departments with frequent interaction adjacent to one another, we were able to simplify workflows and streamline circulation to support staff efficiency and wayfinding for patients.

Current State Flow Analysis



Future State Flow Design

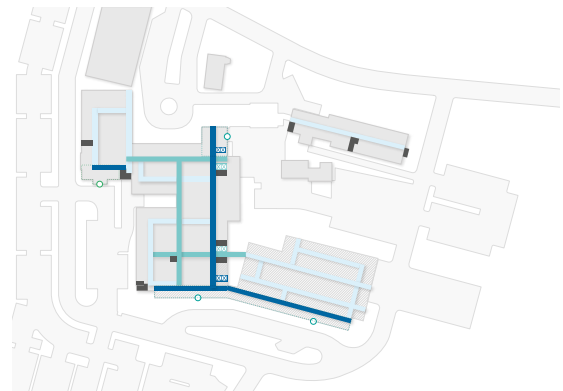


Figure 4 shows the complex flow pattern involved with the original architect's plan (top) and the simplified flow pattern proposed in the new spatial designs (below).

Efficient design for single-bed rooms

To provide a world class patient experience in the new Healthcare Campus, it was vital that the new facility be equipped fully with single-bed rooms. The original architect's plan had only 90 single-bed rooms, whereas our team managed to incorporate 201 single-bed rooms with a cost per square foot 20% lower than the architect's design.

Half the construction phases

By focusing on fewer construction phases, our team managed to reduce phasing by half, from 38 to 17 phases. This can also reduce the management effort and burden on staff and patients associated with construction work.

The value of strategic design thinking

The hospital board was very impressed with how the Philips team approached and carried out the project. They appreciated the structured way our team started the engagement by defining the market needs and technological innovations. As a Philips strategic partner, they valued the depth of experience and insight the team was able to bring to the project in conceptualizing a vision of the future. The project has symbolized the unification of two campuses and hospital systems, and has served as a catalyst for both systems to build a relationship and rally around.

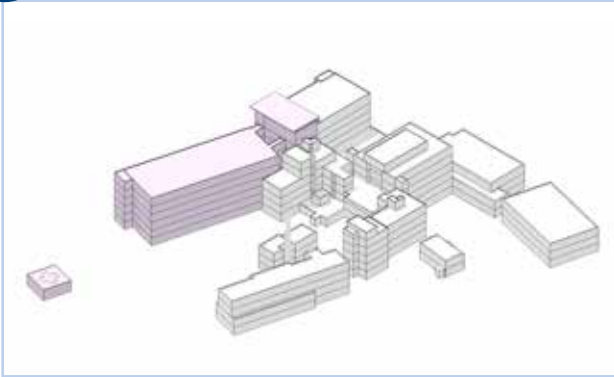


Figure 5 shows a concept for a single-bed patient room in the new Health Campus.

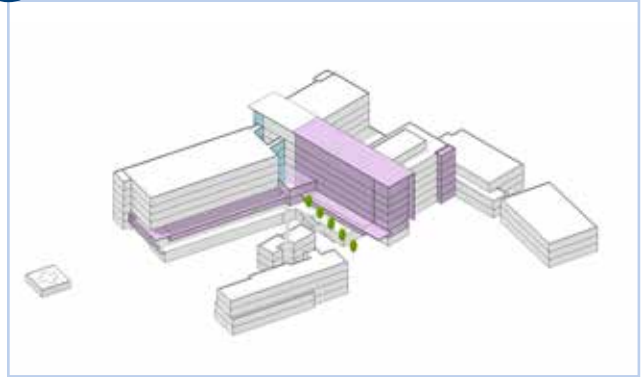
Campus Future Growth Plan

Campus design and phasing for future expansion

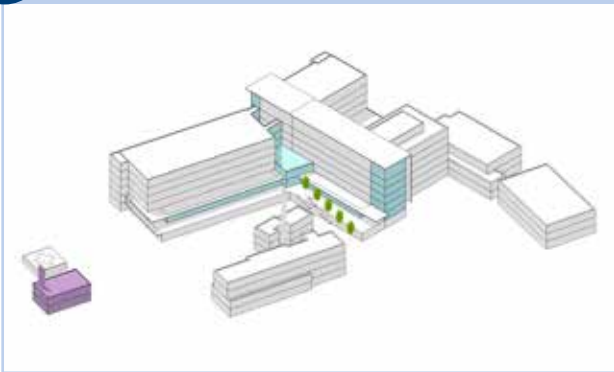
2018 New tower constructed



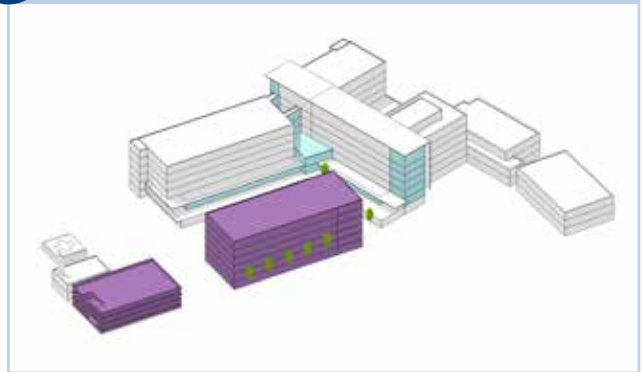
2020 New atrium ink



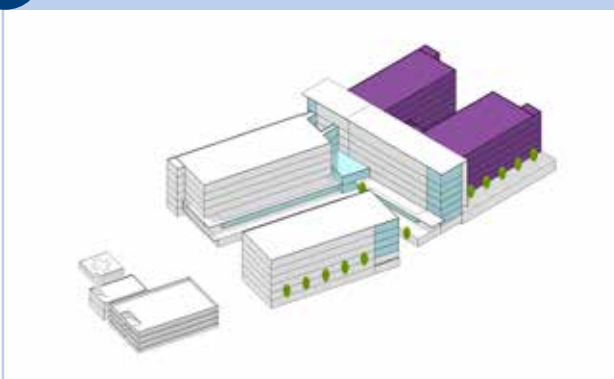
2022 New cup



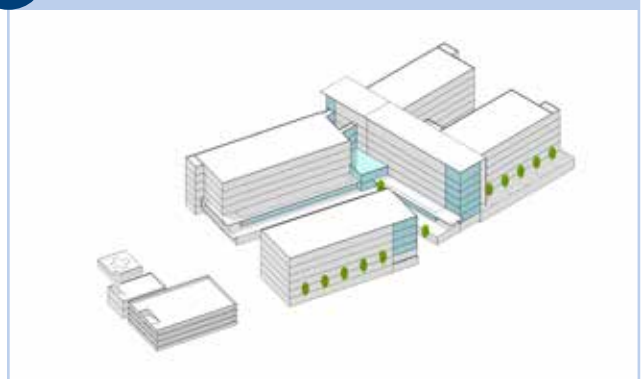
2030 New mob & parking deck



2040 New north & south towers



2040 Completed campus





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