

Planning in a Time of Uncertainty

By Jens Mammen

Healthcare planners and designers are trained to solve problems: we seek the unique opportunities and challenges of any given client relationship, site relationship, and program statement. We bring experience and as much evidence-based precedent to the table that is relevant and timely. How many times have we designed an elegantly innovative solution that minimizes risks and enhances value for our client and our users only to discover that some unforeseen issue, or unanticipated cost, caused the solution to be heavily modified or even rejected? Perhaps the value proposition of our solution wasn't adequately clear, of incorrect scale, or had unintended consequences? Perhaps the solution didn't respond adequately to the level of industry transformation we are experiencing? Wouldn't it be marvelous if we actually solved the right problem?

Facilities, and their sites, are strategic resources. To ensure long-term value, they must foster healing, learning and discovery. They should enhance culture and ensure efficient operations. They should facilitate healthcare quality and safety and respond to technological and pedagogical change. Most important, they should be grounded in integrated clinical care delivery and learning models within facility settings that optimize the use of finite resources.

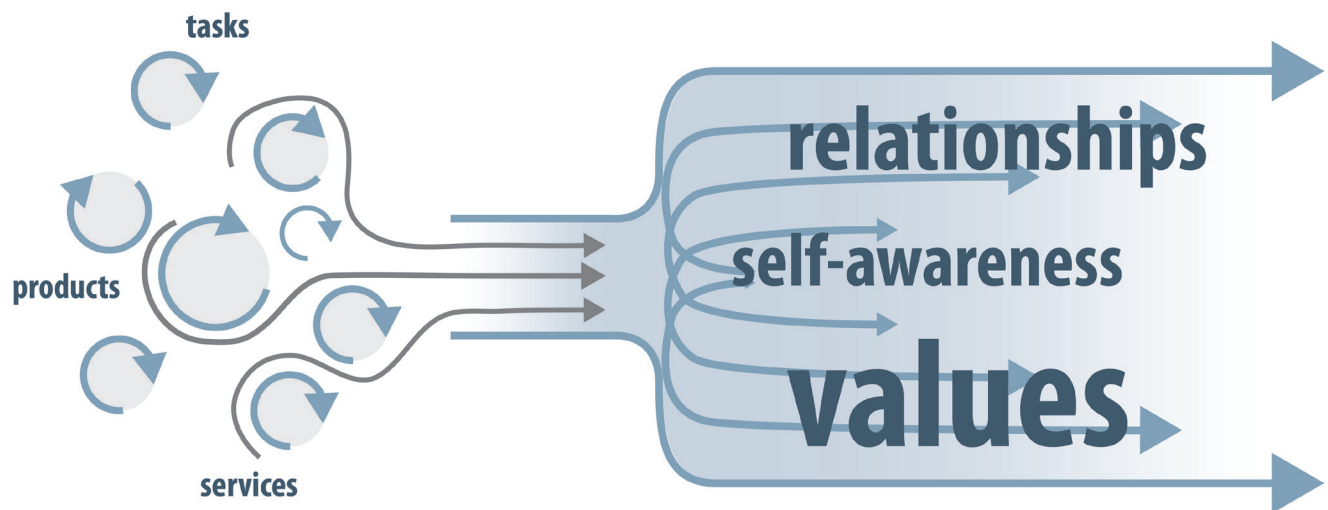
If one embraces the philosophy that resources are strategic, then it follows that industry transformation requires a strategic response. A model of a 'future state' should be individualized for each organization; and that future state should be used as a touchstone for anticipated facility development.

A Potential Future State

The drive toward a more integrated future predates the Affordable Care Act (ACA). It began its acceleration with the NIH Roadmap that spurred the development of interoperable clinical research networks with the intent of ensuring that patients, physicians, educators and scientists form true “communities of research.” The ACA will significantly affect care delivery and require profound change and transformation in the U.S. healthcare delivery system. The common themes that underlie the current legislation are affordability, efficiency, accountability, and quality. Taken together, this can be interpreted to mean, “providing comprehensive higher value quality healthcare to the US population, as a whole, while managing/reducing the cost of such care”; i.e. population-based health.

Each market is different and will evolve over time in response to national, regional, local, and cultural factors. However, the generally expected implications include:

- **Value-Based Models:** Infrastructure systems development to manage and evaluate population-based healthcare delivery based on safety, efficacy, efficiency, and quality.
 - **Standardized Clinical Practice:** The need to become more efficient in delivering necessary resources per recipient and/or managing the amount of resources a recipient may receive.
 - **Public Policy Change:** A restructuring or an expansion of the caregiver accountability model to a broader care delivery team, thereby better managing costs per episode of care.
 - **Provider Integration/Collaboration:** Caregiver consolidation/integration in response to economic pressure, bundled payments, and accountable care concepts.
 - **Accelerated Ambulatory Care Program Development:** Supported by short-stay/non-inpatient beds to achieve locally available, cost-efficient and effective care.
- The healthcare industry will face the need to develop a strategic facility response to an environment characterized by:
- Increasing service demand driven by improved access to care.
 - Potential exacerbated caregiver shortages coupled with ever-increasing patient expectations.
 - Constraints on care delivery and utilization growth due to caregiver and primary care shortages.
 - The development of new care delivery models and health delivery system restructuring in response to bundled payment initiatives, standardized clinical practice efforts, CMS guidelines for hospital admissions, and select payments for wellness initiatives.
 - Population-based care management as implied by such initiatives as Medicare preventive care programs, Accountable Care Organizations (ACOs), and the Medical Home concept.
 - Comprehensive/integrated information systems infrastructure to comply with bundled payment initiatives, standardized clinical practice protocols, and payment initiatives based on quality not quantity.
 - Increased focus on translational clinical research to integrate research protocols more effectively and improve patient outcomes.



Cooperative Competition — “the first of the new”

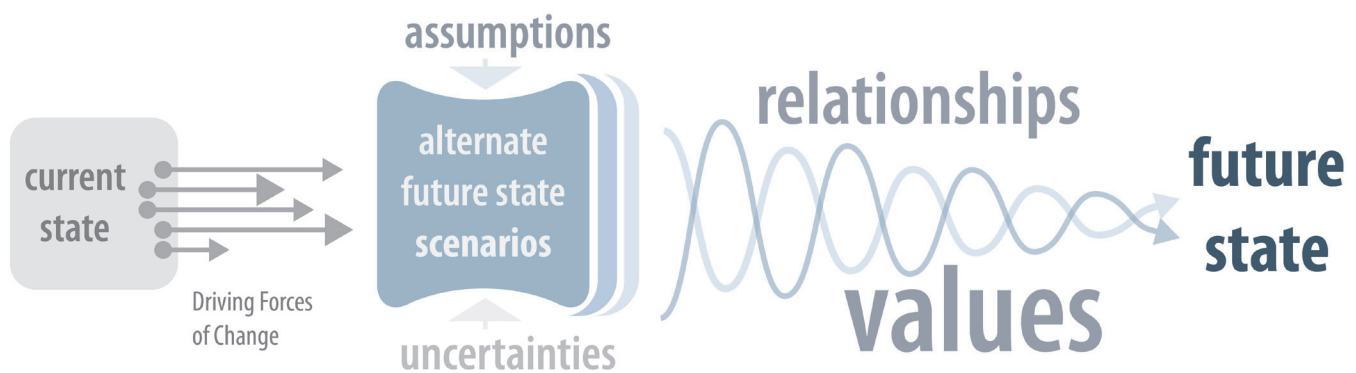
The unprecedented levels of merger and acquisition activity we have witnessed in response to the ACA leads one to wonder if the days of competition for products, tasks and services — where we measured ourselves with market share and quantifiable private assets — may be behind us. When we cooperated it was typically in professional and industry associations to develop standards and best practices. A SWOT analysis and a balanced score card were our strategic tools.

The future seems to be based in strategies inherent in our relationships, our self-awareness, and our corporate values. Our clients, and our industry, are trending toward a more cooperative model in which we avoid the potentially destructive costs of competition. Today, we cooperate to increase or build new market share. We use open sourced social media to identify best practices; we learn from other's experiences. And we adopt new technologies to allow the development of new organizations.

Facilities developed for this kind of a future state are not those that we typically benchmark early in a new commission; today, our creative struggle is to develop the “first of the new”, and not the “last of the old.”

Interdisciplinary and Integrated Approach

Very complex problems require interdisciplinary and integrated solutions. The primary goal of an interdisciplinary and integrated planning process is to holistically address not only the programmatic, care delivery and brand needs from a macro perspective, but also to position the entire organization for a variety of potential future facility and land-use strategies. This type of process is simultaneously inside-out and outside-in; strategic and tactical; technical and aesthetic; physical and operational; inductive and abductive. Interdisciplinary behavior helps us understand the dynamics of cooperative actions.



Inductive Reasoning

Scientific discovery is, typically, characterized by the inductive method. Scientists gather evidence in their labs or clinics, identify patterns of relationships, and formulate an explanation, a hypothesis; *specific observation (experimentation) proceeds to a more generalized conclusion.*

During the design development of a facility, the design team is inductively held accountable to three criteria: cost, time (schedule), and quality. Attempts are made to equally weight these; an extremely challenging balance. We drive this inductive approach upstream into master planning and conceptual design and often find ourselves solving a problem without necessarily having adequately defined it. Our benchmarking, precedent studies, and evidence-based analysis, used as an attempt to prove that our design will work, actually limit our ability to anticipate a future state. There are no case studies for things that haven't been done before.

Abductive Reasoning

Teams of clinicians and caregivers are faced with a broad variety of physical, behavioral and social patterns (symptoms) and attempt to diagnose a condition that best explains their observations. This is an example of abductive reasoning: general observations proceed to a more specific explanation. Not all observations may have been directly related to the specific explanation; a weighting of observations is necessary. Philosophically, the explanation that involves the least cost or effort tends to be the most correct.

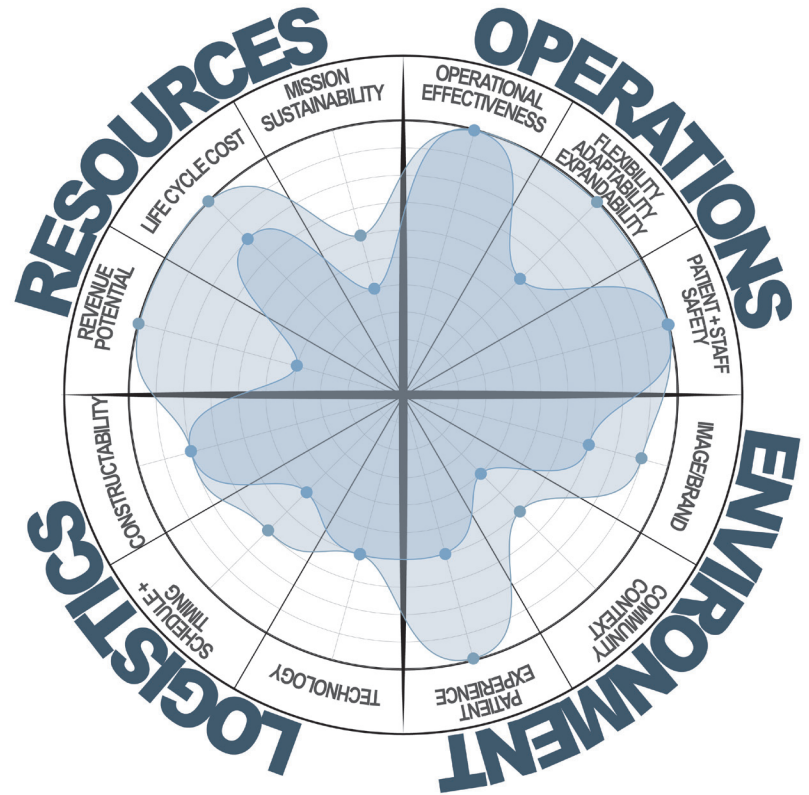
Aside from paradigm shifts or disruptive forces, a future state scenario evolves in an iterative fashion. In other words, there are driving forces or trends today that will likely become significant parts of a future state. The structure of these future state scenarios will contain uncertainties and assumptions, many of which can be identified and considered as risks—risks that can be mitigated through scenario planning. In fact, each organization may look at the same set of risks and assumptions differently, aligned with their organizational values and goals. Taking this process one step further, these organizational values make it possible to envision a variety of 'images' of the future and identify possibilities and constraints.

Using an abductive approach, one can combine a set of driving forces, uncertainties and risks (general observations) and proceed toward more specific explanations (future facility scenarios). Assessing these future facility scenarios with the organization's own values allows a better plan to be developed. This future vision, optimized for each organization, becomes the touchstone for facility development.

Value-Based Practices

How do we assess performance of a future state scenario within an organization's values? We have developed a highly informed value-based process, similar to the "Choosing by Advantages" method, that facilitates a rigorous, comparative evaluation of scenarios. A series of organization-specific performance criteria are developed early in an engagement. These performance criteria are themed into environmental, logistic, operational and resource categories and clearly defined so that specific differences between scenarios can be evaluated. Through this rigorous process, individual preferences and prejudices are replaced by consensus that is actionable and directional.

We have successfully used this model to explore multiple options for site, program, life-cycle economies, facility type and planning configuration. This model is also scalable; having been deployed to assess urban and campus growth patterns for academic medical centers, program consolidation strategies for medium-sized community hospitals and expansion strategies for a single facility. Comprehensive value metrics within the decision model help to evaluate alternative systems strategies, renovation scenarios, replacement options and derive the highest and best value option for implementation.



The senior administrator of a large academic medical center expressed his confidence in this technique when characterizing the resulting plan as an executable "road map" that gave him the agility to implement, in variable sequence, a variety of short-term enablers including philanthropic opportunities, energy grants to address infrastructure, and a way to address deferred maintenance and to mitigate risk. The value model we developed for him was a decision support tool that integrated business solutions and strategic business development, which he stated was, "a powerful tool for planning in a time of uncertainty."

Conclusion

Much has been written in recent years about interdisciplinary and integrated interaction. In his book *The Medici Effect*, Frans Johanson proposes the concept of intersectional thinking as the “best chance for innovation” and “prepared mind discoveries” made likely through “active observation and connection of elements”; elements that are not always directly linked. As our industry moves toward an optimistic response to the changes we face, future state scenario modeling coupled with a comparative analytical process based in an organization’s values has been very successful for our clients. A balance of both inductive and abductive methodologies in order to optimize future state performance and current cost is a critical perspective. In future installments of this series we will be sharing case studies of our experience and observations of our learning.



Jens Mammen

Jens Mammen has over 20 years of experience in strategic planning and architectural design. He recognizes that the built environment is a memorable reflection of a hospital's vision and mission, and that facilities are a strategic resource in the delivery of healthcare. He offers experiences in developing new care delivery models, operational concepts, clinical care models and the facilities to support them. Jens is a founding editorial board member of HealthcareDesign, the journal sponsored by the Center for Health Design, and helped to develop and launch a new graduate healthcare architecture program at the University of Detroit Mercy, one of only a handful of such programs in the country.