

Rx for a Successful Healthcare Project



DPR Construction compared seven highly technical, complex hospital projects completed in California revealing nine key indicators for successful healthcare construction.

Introduction

Hospital construction projects are inherently complex, challenging and difficult, especially in California with the addition of OSHPD (Office of Statewide Health Planning and Development) regulatory oversight.

Following the completion of several major acute care hospitals, DPR Construction engaged Site Plus, a third-party consultant, to conduct independent interviews with owners, design partners and internal DPR team members from seven completed inpatient acute care hospital projects in California.

The goal of the study was to identify what makes a project a success, what are the traits of highly successful projects, and what lessons can be learned from challenging or stressed projects. The names of the projects and people interviewed have been kept confidential. Following are the findings of the study based on the stories, results and lessons learned collected from the participants.



Summary

While California was chosen as the focus of this study, the seven projects studied, with commonalities and diversities, serve as a strong sampling of health-care projects:

Project Commonalities:

- State agency Office of Statewide Health Planning and Development (OSHPD) oversight
- Acute care medical facilities
- Significant large-scale projects
- Completed over a 10-year span

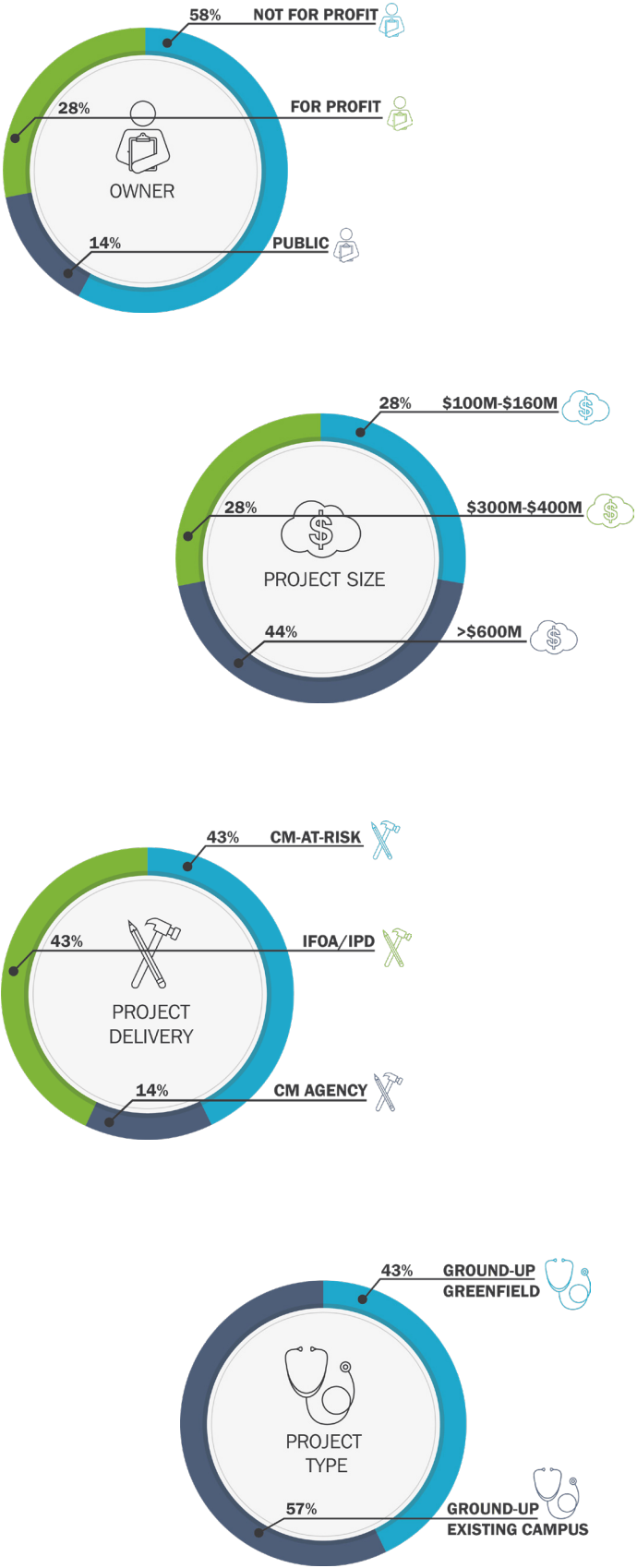
Project Diversities:

- Project sizes, ranging from \$100M to nearly \$1B
- Customer types including public, non-profit and for profit
- Delivery methodologies including Construction Manager at Risk, Integrated Form of Agreement and CM Agency
- Academic medical facilities to community-based hospitals
- Expansions on existing operating campuses to greenfield hospitals
- Outcomes, from successful to stressed

Some consistent patterns found in the successful projects:

- A high level of collaboration and integration
- A very engaged owner
- An environment promoting continual improvement over time
- A fully co-located team that was adept at adapting to change
- A fundamental mind-shift to invest in the project goal and team relationships
- Dedication to a higher purpose by putting the needs of the project ahead of the needs of each individual company

PROJECT CHARACTERISTICS



Rx FOR SUCCESS

9 KEY INDICATORS FOR A SUCCESSFUL HEALTHCARE PROJECT



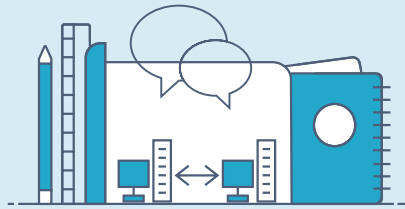
1. TRULY ENGAGED OWNER

More owner engagement leads directly to success. Successful projects have hands-on owners present, with the ability to make timely decisions and then keep to those decisions.



2. PROJECT MISSION AND VISION

Establish collective goals as a project team. Develop the purpose, vision, project goals and key performance indicators at the onset of the project. In healthcare, the vision is typically about the higher purpose of the patient and the project as a community benefit.



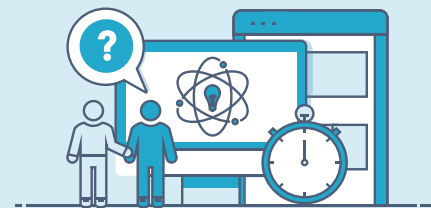
3. CO-LOCATE (THE BIG ROOM)

Team member commitment from the beginning. The study revealed that the “Big Room” enhanced a common understanding of values and goals, a foundational culture, the tenacity to keep improving, and the ability to make definitive decisions quickly.



4. RIGHT TEAM / RIGHT MIX

Assess team dynamics and recalibrate along the way. Experience may win the project, but it's the right people on the team who will lead to the greatest success.



5. ACT SWIFTLY WHEN NECESSARY

Be ready to change and act quickly. A person may have certain attributes that contribute to one of the project goals, but if they don't embrace ALL project goals in an open unrestricted manner, it will set up barriers.



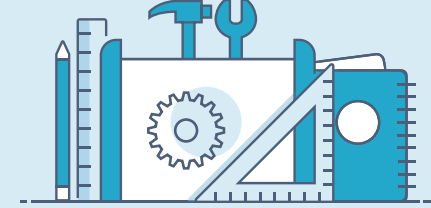
6. INVEST IN THE TEAM

Tailor team building and purpose to specific team dynamics. Ongoing team building, both formal and informal, does lead to better team dynamics. The successful projects made the time to pause and recalibrate.



7. SHARE KNOWLEDGE & SET GOALS

Successful projects push to be better. If you aren't keeping score, it's just practice. Add the priority of continuously getting better by asking “is there a better way?”



8. LEAN CONSTRUCTION METHODS

Use a discipline of best practices. Tools like Pull Planning, Target Value Design and A3/Choosing by Advantages Decision Making are some of the items used in successful projects in varying degrees.



9. AUTHORITIES HAVING JURISDICTION

Understand, accept and work with regulations. Regardless of project location or authority having jurisdiction, inspectors are key to the process. Understand their requirements and make them part of the team.

The projects were categorized as successful or stressed based on input from the internal DPR project teams. The purpose of the study was to gain perspectives from the external partners to see if they felt the same way and why. Each in-depth interview started with two key questions being asked: what does success mean to you and what makes a project successful? Both quantitative and qualitative feedback was sought on additional topics including:

- Successfulness
- What went well
- What could have gone better
- Surprises encountered
- Unresolved problems
- Problem solving environment
- Team building
- Delivery method
- Best practices
- Technical capabilities
- Change order process
- OSHPD/IOR

Participants of the study were asked to “define a successful project.”

The majority of answers concentrated on or included “people” rather than just project metrics as an important element. The individual team members had shifted their focus from thinking

about their individual companies needs to putting the needs of the project first. These are some of the respondent comments:

A project delivered collectively, that the team can be proud of, and the team would seek to work together again.

Beyond financial, schedule and function, it is people being enriched through the process.

A client satisfied with the quality of the work, the project making a respectable profit and finishing on time, and personal relationships that are maintained and strengthened.

Contributing to the best possible care of patients.

A quality project that meets the owner’s objectives and program. Coming out of it with business friendships that turn into personal friendships. Making money comes after these.

Getting the building you pay for, on time and within budget. But also putting smiles on the faces of the users. Making something that’s very difficult look easy.

Mutually agree with the owner on the project goals for quality, cost and schedule and then meet them.

On time and on budget and when it’s all over, you feel like everybody did everything they possibly could.

On time, on budget, exactly as asked.

Optimizing patient care for patients and their family.

A proud owner who wants DPR to build for them again.

Positive engagement of team members continuing throughout construction.

When everyone that is invested in it can walk away successfully.

When what is promised is delivered, for the established amount and with the quality deserved.

When you complete the scope of work within the time and dollars available.

Work that is meaningful and makes a difference.

As a follow up, participants were asked, “was [this] project successful? Why or why not?”

Responses went beyond a yes to include “absolutely,” “outstanding” and “project of a lifetime.” From the takeaways featured as follows, it goes beyond being on time, on budget or meeting quality expectations. Often said of budget, time or quality, you can only have two of the three. The responses challenge this myth. Through the successful collaboration and integration of project teams and needs, the study suggests all three can be delivered successfully.

It bested all market conditions.

Clinical program delivered and built as planned.

Commitment to continuous improvement.

It was fun to work on.

It was the commitment of the team aligned around a single cause.

It was the perfect storm of success and the entire team would not accept failure.

Yes. From a relationship point of view, we still talk to each other and want to work together again.

Yes, the expectations of the defined scope were met. And the users have been happy with it from day one.

Positive engagement of the team members continues.

Team members did not want to leave the project – it was the best project they had worked on and they felt a personal connection.

The owner had a vision and DPR articulated it.

Under budget, on schedule and highest quality.

Participants were asked, “what words come to mind when you think of this project?”

The responses evoke the highlights and the lowlights participants remember from working on healthcare projects, which have their own special set of requirements for success. The most frequently mentioned words in the survey responses were: challenging, fun, collaborative, trust, iconic and complex. Some of the same words were mentioned for both the successful and stressed projects, such as brutal, iconic and hard. Below are some of the responses gathered.



Nine Key Indicators for Project Success

A number of themes, patterns and key differentiators were identified from the interviews. These have been consolidated into the nine key indicators for project success. When these indicators are present, the study found there is much more likelihood of an aligned and resilient team that will work collaboratively to face/overcome challenges and be successful. These indicators are now being shared with a goal of aligning project collaborators and integration in successful project delivery, and designing and building better, higher-performing buildings.



1

Truly engaged owner

More owner engagement directly leads to success. All of the successful projects had hands-on owners present with the ability to make timely decisions and then keep to those decisions. Other projects had owners putting time into the project, but not necessarily focused on the end result. It is more about the pure engagement and not the involvement. The owners of the successful projects never relented on expectations for high achievement, innovation and project efficiency, an aligned culture and project community. It was a step beyond commitment, it was inspiring and disruptive to the status quo of involvement.

It is also important to understand the owner’s style and organization. The more communication, trust and candid transparency there is early in the project, the better the team can proactively adjust to the realities of the team structure. Owners of successful projects relied on the design and build teams to provide data driven project information, so they could make timely decisions.

Example: This owner drove collaboration and trust to a new level. It was forced at the beginning with formal team building that just firmly established the collaborative culture. The philosophical level of the mutually-agreed-upon goals truly brought alignment to the team. The leadership and tenacity of the owner took the team to a whole new level by building a culture everyone embraced.

“The commitment from leadership to do something different and having a different experience of delivering a project of this size. “

“[The owner]...was involved in the early development of the project setting targets and expectations, streamlining the decision-making process and establishing the culture.”

“[The owner]...was committed to doing something outside of the traditions and worked hard to get it right.



2

Align the team with the project mission and vision

Establish collective project goals as a team, with buy-in from all involved early in the project so individual stakeholder goals become secondary. Develop the purpose, vision, project goals, key performance indicators and how the project will be seen as a success at the onset of the project. Team commitment and project goals go beyond measurable items, they often include behavioral traits that are key in working together. Track and measure these goals and behaviors on a regular basis. Adjust accordingly as needed, always fairly and within the best interest of the project. This is one of the most consistent features of a truly integrated project organization.

Develop trust early. Silos and individual stakeholder needs cannot exist. Be open with advice and ideas early. If you believe something is not right, speak up and never say “we can do it” when you know we cannot. This transparency builds a team bond where barriers do not exist.

In healthcare, the vision is typically about the higher purpose of the patient and the project as a community benefit and aligning around the collective mission and goals of the project. This extends to the entire project team, beyond just the management team. Having key hospital leaders share the purpose and goals to the craft personnel is huge. Celebrate successes as a team during the project.

Example: The owner’s leader shared that it was a hard start—the focus and direction of the team was slow to form. Once the right people were at the table, they defined what they wanted to accomplish, and things began to jell. The individual team members were committed to doing something non-traditional and worked hard to get it right. They were really doing it for a long-term outcome, not just designing and building a hospital. They came together to make a difference and their decisions were focused on what was best for the patient. This was the turning point.

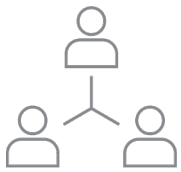
“It is the why – making a difference in people’s healthcare.”

“The team was so committed and believed the project was not complete until the patients were in beds.”

“A vision was created with very specific behaviors for the team. This vision became the filter to make decisions at all levels.”

“It was a community asset that engaged everyone to do their best.”

“Ultimately, it was the commitment of key participants all aligned around a single cause. The owner had a vision and aspiration and the entire team articulated it and delivered.”



3

Co-locate (the Big Room)

Get all team members to commit to a co-located “Big Room” from the very beginning. Although not a guarantee, co-location has a tremendous influence on success. In this study, 80% of the successful projects co-located on site for the benefit of the project. Full participation, and the sooner the better, were mentioned repeatedly. The study revealed that the Big Room enhanced a common understanding of values and goals, a foundational culture, the tenacity to keep improving, and the ability to make definitive decisions quickly.

Investment in the right location, right tools and right processes in the co-located Big Room space are important to project success. Together the team needs to decide how it will operate once co-located. Decisions on when meetings will occur, and how the team is organized are examples of the many decisions that are required to operate as a high-performing team. Some hierarchy is good. Clarity of responsibilities and a core leadership team who are present and accounted for lends stability to the environment. Don’t be afraid to try different things and don’t be too rigid. Big Room schedules, meeting times, seating layouts and integration plans all must be considered and may need to be altered before arriving at the right chemistry. The establishment of a team leadership committee who will make tough decisions when necessary is key.

Another topic is who are the right people to be in the co-location space. This needs to be agreed upon by the team prior to co-locating. Design schedule, critical path and procurement will help inform the team on when trade partners need to be onboarded to the project team. From there, who needs to be in the Big Room becomes clearer. For example, it makes little or no sense to have the mechanical trade partner co-located if the mechanical engineer is not in the Big Room.

Example: The team was fully bought into the higher purpose of the project. They felt that seeing each other every day changed the team dynamics for the better. It greatly facilitated a stronger belief in and support of each team member.

“If there was a surprise, the team came together and swarmed the issue.”

“The fact that we were in constant contact gave us the ability to speak very frankly to one another. The barriers came down.”

“Collaboration works but you need to create it. That’s why it is successful.”



4

Right team/right mix

Make a continuous assessment of team dynamics and recalibrate along the way. Experience may win the project, but it's the right people on the team who will lead to the greatest success. Often you do not know until you are in the heat of the project. Stated by two interviewees, "80% of the team carries the 20%." Do you have the right 80% on your team and what is the plan for the 20%?

Onboarding is critical. Be careful to not underestimate the importance of transitioning new team members, especially as the "right mix" is forming. In addition to getting up to speed on a complex project, setting the expectations that are unique to the project are essential (i.e., culture, vision, goals). Each project has special characteristics and personalities.

The right mindset is also necessary. Some people just don't get it or are unwilling to change. Other times, people can't make the commitment to the project and team due to personal commitments. It may mean that these people are in the wrong seat on the bus or shouldn't be on the bus at all.

Don't assume success on future awards. Although the same team may be proposed, there is always something different. It takes more investment and setting higher standards for success when moving a team from one project to the next. Remember high expectations were already achieved and the bar is now higher.

Example: The owner's representative saw that the field team needed additional director-level help and pushed hard not only to get that to happen, but to get the right person with the specific experience relevant for their project. When that finally did happen, the new addition proved their worth and became a welcome and highly contributing member of the team.

"It takes work. It is more than mixing good firms and people."

"We all succeed together or fail together."

"We had an all-star team on the project and we all bought in to the belief that we all succeed together or we all fail together."

"The relationships were not perfect (we are human!) and some members were changed mostly because they did not buy in to the methodology and rules of engagement. This just happens."



5

Act swiftly when necessary

Be ready to change and act swiftly when things start going down the wrong path. Not often, but occasionally, there is someone on the team who doesn't understand or buy in to the process or put the needs and vision of the project first. At that point, it is important to make a change and not to wait too long to do so. A person may have certain attributes that contribute to one of the project goals, but if they don't embrace ALL project goals in an open unrestricted manner, it will set up barriers. While it may be uncomfortable, don't let things fester; it is probable that they won't get better. The study revealed that being willing to make these hard changes at any point in the project made a difference in ultimate project success.

Example: When a new owner's representative came on this project, every project participant was re-evaluated based on performance, communication and commitment to the team. As the new team coalesced, and got really tight, their attitude was "together, we're going to get through this. And when they got push back, they pushed back together as a whole united front."

"A functioning team can accomplish so much."

"It just took so long to get there and relationships got very strained along the way."

"You need to constantly assess people and processes, and fix things along the way."



6

Invest in the team

Tailor the team building and purpose to the specific team dynamics and adjust as needed. It's about the care and feeding of the team. Ongoing team building, both formal and informal, does lead to better team dynamics. The successful projects made the time to pause and recalibrate. Monthly team surveys are important and will help the team adjust during the project. Don't wait until the end of the project to figure out what went well or not. It's important to celebrate project successes, big and small. Establish a schedule and celebrate significant successful project milestones. Don't forget to have fun.

As identified earlier, co-location is a key metric in the outcome of a successful project. Invest in the right tools to do the job. Items such as work stations on wheels will help. A recent survey on co-location spoke about not only its make-up but also its location relative to the project, having the right conference room space, rest rooms and a pleasant environment for those working in the big room. Never underestimate the power of having a physical environment that supports collaboration and efficiency for the team.

Example: The length of the project allowed for the opportunity to fine-tune over time, and the team dynamics continuously improved. A vision was created featuring very specific team behaviors. This vision became the filter for decision-making at all levels (including tough team changes). The team had a level of vulnerability and transparency that helped steer a very complex project.

"The team was professionally enriched – it was a human success."

"You need to get away from the project to create relatedness—we are not job categories, we are people."

"There was a little element of luck specifically the alignment of the team and coming together; although there was a lot of investment."



7

Share knowledge and continuously set higher goals

Successful projects push to be better. If you aren't keeping score, then it's just practice. Add the priority of continuously getting better by asking "is there a better way?" and recognize the team's power of achieving and learning together. Document the learning journey. Every team member wants to continually improve. Sharing the good and bad is a must. Share project metrics openly with the team and set new higher goals as existing ones are achieved. The shared knowledge adds to team cohesion and team energy is renewed with milestone successes. This combination leads to true innovation and better ways to deliver.

Example: The owner viewed his role as cheerleader, antagonist and author of wildly high expectations. He truly believed that success comes down to the individuals—those who are willing to form and be a team, willing to work at maintaining this atmosphere with the ultimate goal of continual learning, driving improvement and innovation. The team rose to the challenge!

"If success is not defined, how do you know if you are successful."

"It was the mindset of the people and how we operated as a team. Every day each team member was open to new ideas. No one was offended by ideas."

"Everyone learned from each other's successes and failures."

"If you're truly open, within a well-functioning team, then everyone sees and acknowledges the strengths and the shortfalls of the entire process, including the owner."

"Everything can go better—that's what we strive for."



8

Discipline of best practices/ lean construction methods

Take advantage of the plethora of already established and developed best practice tools, particularly Lean Construction tools, while being flexible in adapting them to best fit the specific project. Best practices are varied for each of the seven projects studied. What didn't vary is the "all in" attitude for the successful projects and the disciplined approach.

There are many Lean Construction tools available. Tools like Pull Planning, Target Value Design and A3/Choosing by Advantages Decision Making are some of the items used in successful projects in varying degrees. It is up to the team to decide which ones will be used and how they will be used. It is important to communicate the benefits of each one used with the team. Establish the ground rules together.

Example: Lean Construction tools were noted such as Target Value Design, Lean planning (pull planning), BIM execution plans, design chunking, building clusters, process mapping, file sharing (BOX, BIM360), value stream mapping, live project dashboards, model-based estimating, commitment tracking, and A3 decisions. Other best practices mentioned include Tool Time, subcontractor due diligence, portable technology and specific resolution meetings with the leadership team. The key was to stay flexible, re-evaluate regularly and be open to change. "What worked today, may not be the right approach tomorrow."

"The project 'bested' all market measures using LEAN practices."

"Best of the best innovative thinking teams – no one was offended by ideas."

"The DPR team was young and very tech savvy. When it came to BIM and other construction software tools, they were really great. They were always thinking outside the box on how to speed things up or be more efficient."



9

Authorities having jurisdiction

Understand, accept and work with regulations rather than fighting them and trying to find ways around them. Working in California means working with OSHPD and IORs (Inspectors of Record). Their oversight is one of the unique aspects of constructing California healthcare projects. It is imperative to build to the drawings approved by OSHPD/IORs. You can't come in later and say "we have a better idea." The IORs are key to the process. Integrate the IOR with the project team. Understand their requirements and make them part of the team. This is true regardless of project location or authority having jurisdiction.

Example: OSHPD was an integrated team member – there was no "offense or defense," just consistent communications. They were proactively part of the process.

"The IOR was in the tide with us."

"When you disagree with a regulatory agency, you have a right to voice your concerns, but you're going to lose pretty much every time."

"The goal was to be OSHPD's best customer."

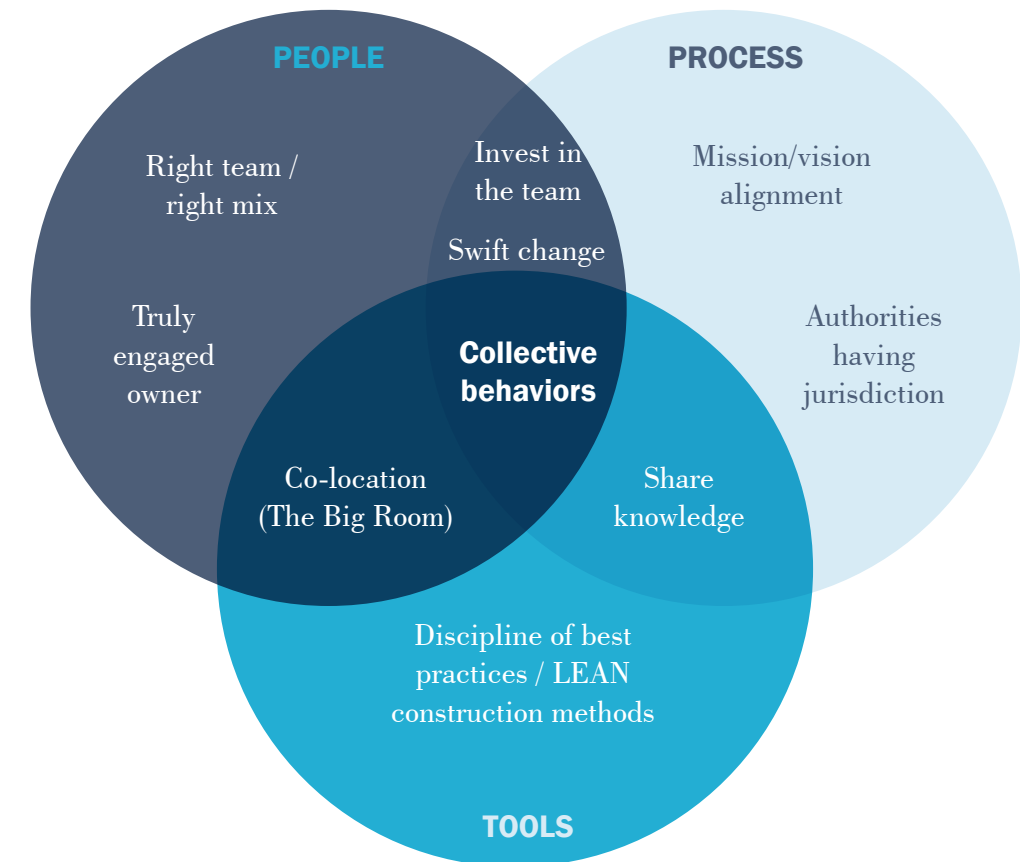
Conclusion

While delivery of healthcare projects is technically challenging, unique and complex, this study sought to discover processes and tools that were game changers for successful projects. All seven of the studied projects featured different delivery methodologies and unique challenges.

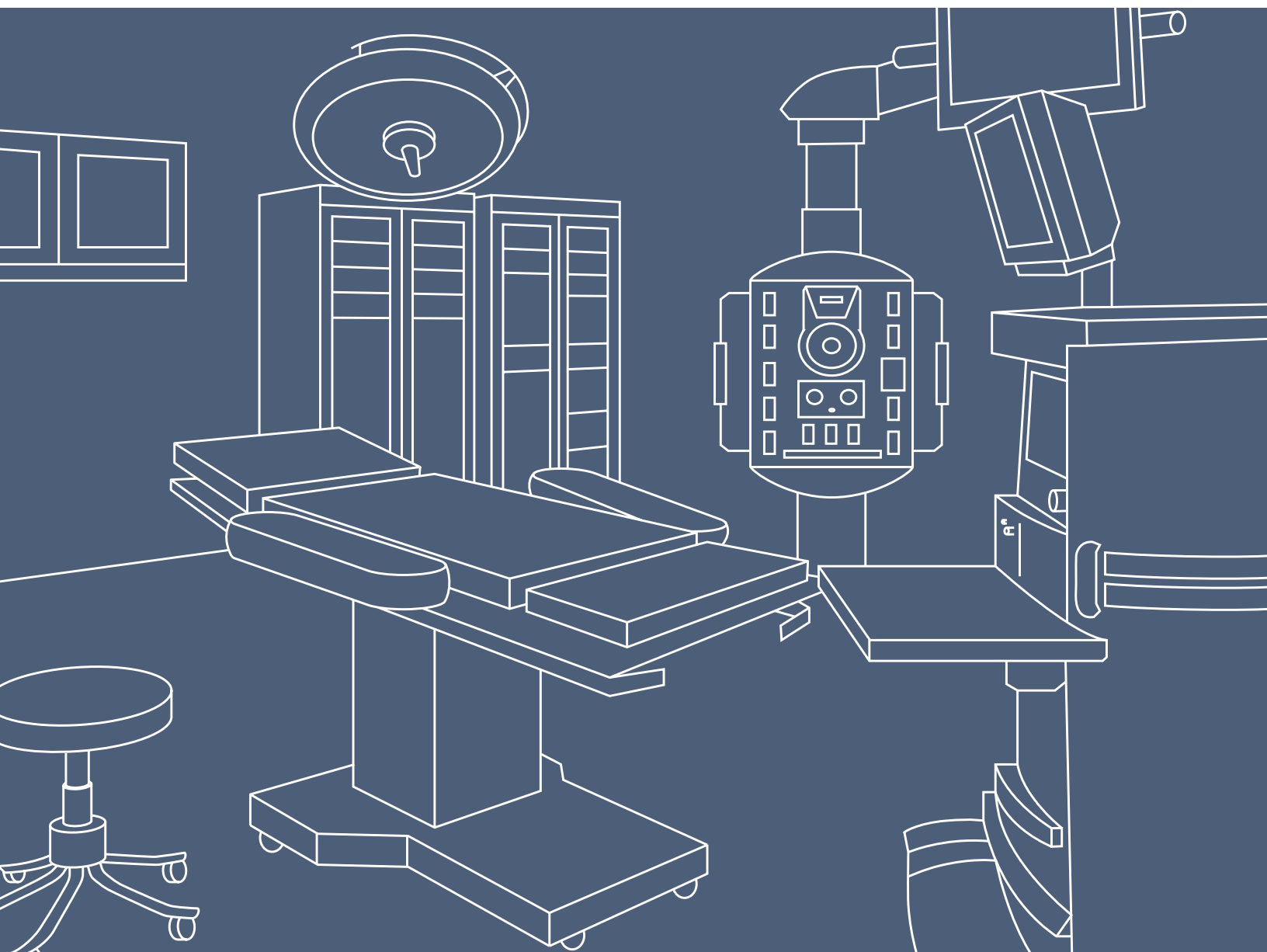
The nine key indicators for project success reveal an alignment of behaviors by the entire project team. These collective behaviors were present at an exceptional level on successful projects. Conversely, they were not as present in the stressed projects. A resiliency was formed to tackle the natural challenges of design and construction that resulted in a high functioning collaborative team of people realizing a career defining experience, as many stated in the interview.

Community of Behaviors

People, process and tools are the substance of successful construction and integrated project delivery and they create an overlapping synergy. DPR's California hospital study revealed that the intersection of each is what makes the difference: when a community is established within the team – people act, think and behave collectively in the best interest of the project. In other words, "everyone is all in." This is not easy and requires a lot of hard work, the willingness to adapt and a tenacity to keep getting better. The rewards are considerable for the team and for the project.



DPR CONSTRUCTION is a unique technical builder with a passion for results. Consistently ranked among the top healthcare builders in the nation, DPR is a national commercial contractor and construction manager that has grown with its customers by delivering measurably more value. A leader in integrated project delivery, lean construction and building information modeling, DPR listens to customer goals and helps to develop the right strategies for successful project delivery—building a foundation for quality care.



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