



Rx for a Successful Healthcare Project, Part 2

9 KEY INDICATORS LEAD THE WAY TO SUCCESS

Introduction

What are the common traits of successful healthcare projects and what lessons can be learned for application on future projects? In 2018, DPR Construction and Site Plus, a 3rd party consultant, aimed to determine this, studying seven projects in California. The results from [the 2018 study](#) indicated identifiable patterns for success and pinpointed **9 Key Indicators for Project Success**.

In 2020, DPR expanded the study group to further examine the 9 Indicators. **Rx for a Successful Healthcare Project, Part 2** is the result of 48 one-on-one interviews that Site Plus conducted across the country on 9 of DPR's recently completed, significant healthcare projects.

It is a given that healthcare projects are inherently complex, and the results of this study underscore that premise. Teams use descriptive words like challenging, collaborative, and career-changing simultaneously. How can we leverage these characteristics to increase the probability of success?

The findings of this study verify the previously-identified leading success indicators for healthcare projects—perhaps any construction project—and provide a road map that can propel a project toward success.

DPR's study of the common traits of successful healthcare projects has led to 9 Key Indicators; these behaviors are replicable and have been proven to enhance team collaboration, owner satisfaction, and project success for all involved.



Projects included in the 2018 and 2020 Rx for a Successful Healthcare Project studies.

Rx FOR SUCCESS

9 KEY INDICATORS FOR A SUCCESSFUL HEALTHCARE PROJECT

The two-part Rx for a Successful Healthcare Project study is based on DPR Construction's analysis of 15 hospital projects across the United States and nearly 100 one-on-one interviews of owners, architects, and project team members.

1. TRULY ENGAGED AND DECISIVE OWNER

More owner engagement with key decisions leads to success.

2. TEAM ALIGNED WITH PROJECT MISSION AND GOALS

Establish collective goals as a team, develop trust early and recognize the higher purpose of healthcare projects.

3. RIGHT TEAM WITH THE RIGHT MIX

Make a continuous assessment of team dynamics and re-calibrate along the way.

4. CO-LOCATION AND EARLY COLLABORATIVE INVOLVEMENT

A collaborative culture requires commitment at the very beginning.

5. ACT SWIFTLY WHEN NECESSARY

Be ready to take decisive actions and do so at the right time.

6. INVEST IN THE TEAM

Ongoing team building leads to better team dynamics.

7. SHARE KNOWLEDGE AND COMMUNICATE

The sum of shared knowledge is greater than the sum of any individual's knowledge.

8. DISCIPLINE OF BEST PRACTICES

Take advantage of tools such as Lean Construction Methods.

9. ENGAGE AUTHORITIES HAVING JURISDICTION

Understand, accept and work with regulations.

Study Process

The integrity and depth of this study is based on one-on-one interviews with each participant. Twelve (12) qualitative questions were asked with open dialogue encouraged. Quantitative rankings (1-low, 10-high) of the 9 previously identified indicators were then posed to participants.

The qualitative questions provided a baseline of data to determine and analyze patterns. The quantitative rankings further examined the already established 9 Key Indicators of Success. Participants were asked first "How important do you think this aspect is for project success in general?" Then they were asked "How successful was this aspect on this particular project?" The differences between the overall importance ranking and the how successful ranking on this project offers valuable insight into areas for future focus.

QUALITATIVE TOPICS

- Successfulness
- What Went Well
- What Could Have Gone Better
- Surprises Encountered
- Unresolved Problems
- Problem Solving Environment
- Team Building
- Best Practices
- Working with Authorities Having Jurisdiction
- What Would You Do Different Next Time

QUANTITATIVE TOPICS – 9 KEY INDICATORS FOR SUCCESS (SCALE 1-10)

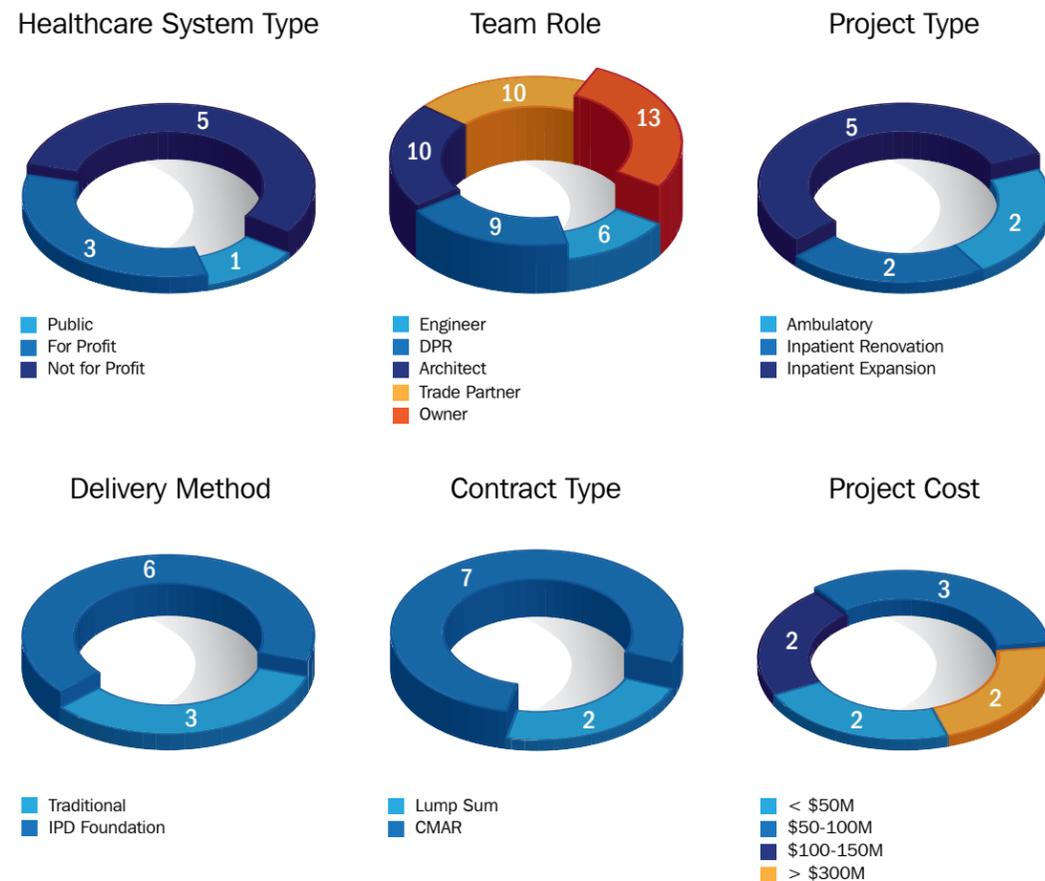
- | a. How important? | b. How successful on this project? |
|-------------------|---|
| | Truly Engaged and Decisive Owner |
| | Team Aligned with Project Mission and Goals |
| | Right Team with the Right Mix |
| | Co-Location and Early Collaborative Involvement |
| | Act Swiftly When Necessary |
| | Invest in the Team |
| | Share Knowledge and Communicate |
| | Discipline of Best Practices |
| | Engage Authorities Having Jurisdiction |

Projects Studied and Project Characteristics

Nine projects were selected in Arizona, Texas, Florida, and Virginia. Forty-eight interviews were conducted with owners, architects, engineers, trade partners and DPR project executives. The projects studied have commonalities and diversities representing a wide range of healthcare projects.

- **Banner University Medical Center Phoenix Emergency Department and New Patient Tower, Arizona**
- **Banner University Medical Center Tucson Replacement Hospital, Arizona**
- **Baptist MD Anderson Cancer Center, Jacksonville, Florida**
- **Center of Advanced Healthcare at Brownwood, The Villages, Florida**
- **Inova Loudoun Hospital North Patient Tower, Virginia**
- **JFK Medical Bed Tower and Central Energy Plant, Atlantis, Florida**
- **Northwest Medical Vertical Expansion and Central Energy Plant, Margate, Florida**
- **THR Alliance Medical/Surgical and Emergency Department Expansion, Fort Worth, Texas**
- **VCU (Virginia Commonwealth University) Health Perioperative Services Renovation, Richmond, Virginia**

The nine projects studied have commonalities and differences, but are representative of a wide range of healthcare projects.

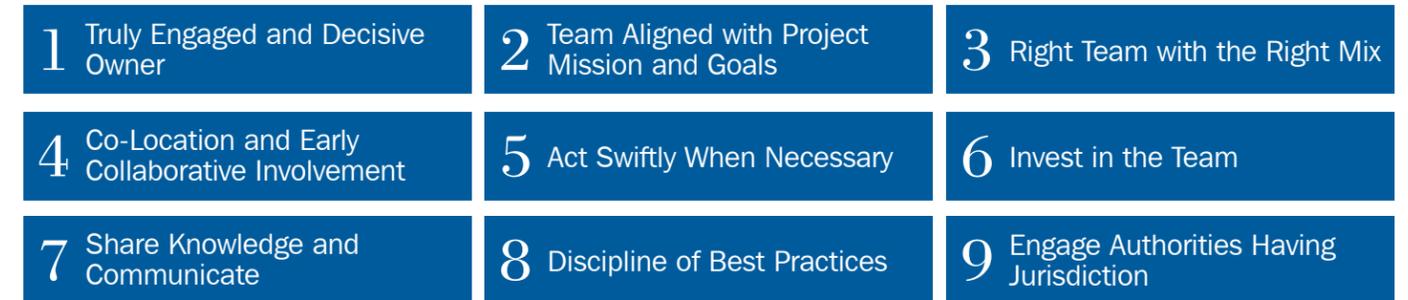


9 Key Indicators for Project Success

As we learned from Part 1 of this study, when the 9 Key Indicators are present, there is much more likelihood that an aligned and resilient team worked together through challenges and was successful, both personally and professionally. The 9 Key Indicators were corroborated by the projects in this Part 2 validation study. While interview participants acknowledged the importance of each indicator, they often did not give any top ratings specific to their project. Site Plus attributes this to a reluctance to score themselves or their own performance as perfect, especially in an environment that champions continuous improvement (a secondary goal of this study).

With the indicators identified in the initial study, this deeper dive assessed both quantitative metrics in addition to collecting qualitative material.

Only two indicators scored somewhat lower in importance than in success, Co-location and Early Collaborative Involvement and Engage Authorities Having Jurisdiction. Was the lower importance ranking just due to relevance? Both indicators have nuances on the projects selected for this study that may have affected the score and these will be examined individually on the following pages.

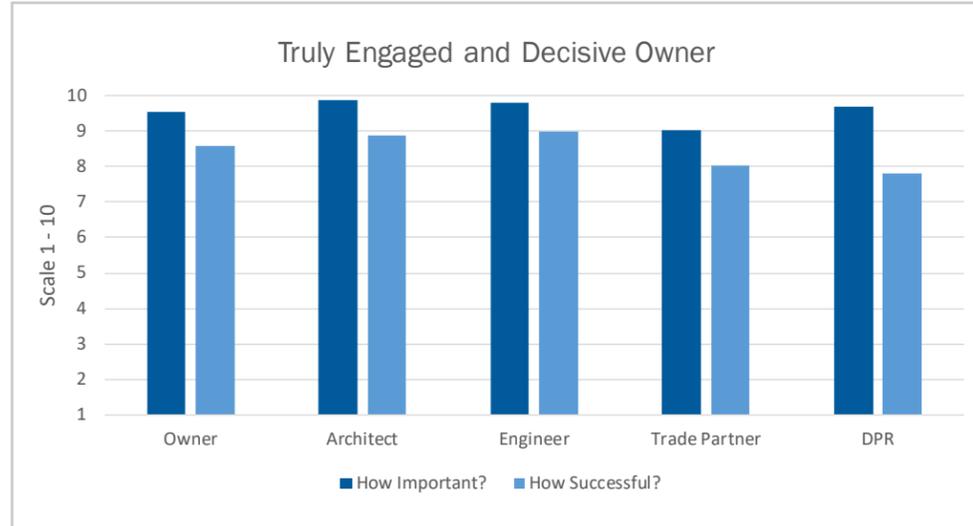


1

Truly Engaged and Decisive Owner

More owner engagement leads to success. Engagement is beyond being present. The truly engaged owner is specific about their expectations for high achievement, innovation and project efficiency and demonstrates it themselves. A decisive owner understands the key issues, makes timely decisions, and then sticks to those decisions.

- **Clarity.** When the owner is clear on expectations and aligns the rest of the project team with those expectations, a project “community” forms.
- **Decisiveness.** The owner who listens to the team, quickly makes informed decisions and doesn’t vacillate, grows a team culture of partnership and trust.
- **Status quo is unacceptable.** Owners who foster an environment of innovation and open communication provide inspiration which directly benefits the outcomes of the project.

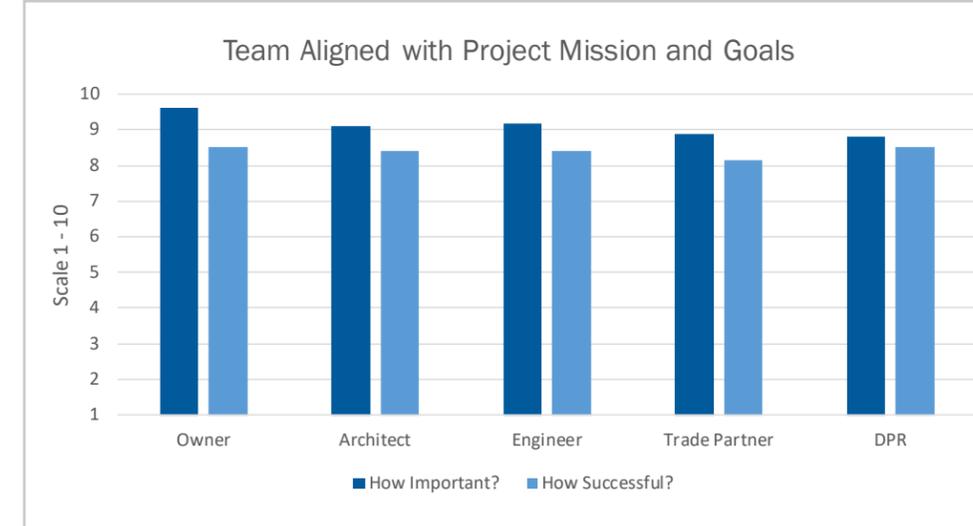


2

Team Aligned with Project Mission and Goals

Establish collective goals as a team, develop trust early and recognize the higher purpose of healthcare projects. Teams that collectively set the project mission and measurable goals early, lived by them and advocated a core purpose of improving the lives of others excelled. Goals need to be measurable, track them accordingly, and compare progress to intended milestones to see how you are stacking up to the goals.

- **Maintain focus.** Change is unavoidable on healthcare projects, but with an over-arching goal and mission, the team will stay on the same page.
- **Align company cultures to directly benefit the “project culture.”** The power of cultures that mirror each other is foundational for trust and collaborative thinking and is the core of the team relationship.
- **Open communications where everyone talks to each other and there are no bad ideas.** A consistently collaborating culture creates a transparent and level playing field for all team members.



If you don’t have owner engagement you are ‘dead in the water’—there’s little hope for success.

— OWNER PROJECT EXECUTIVE



The team understood the common goal and were willing to relinquish roles and controls—it was team first, project first, individuals / companies last.

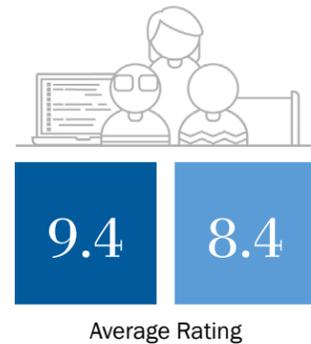
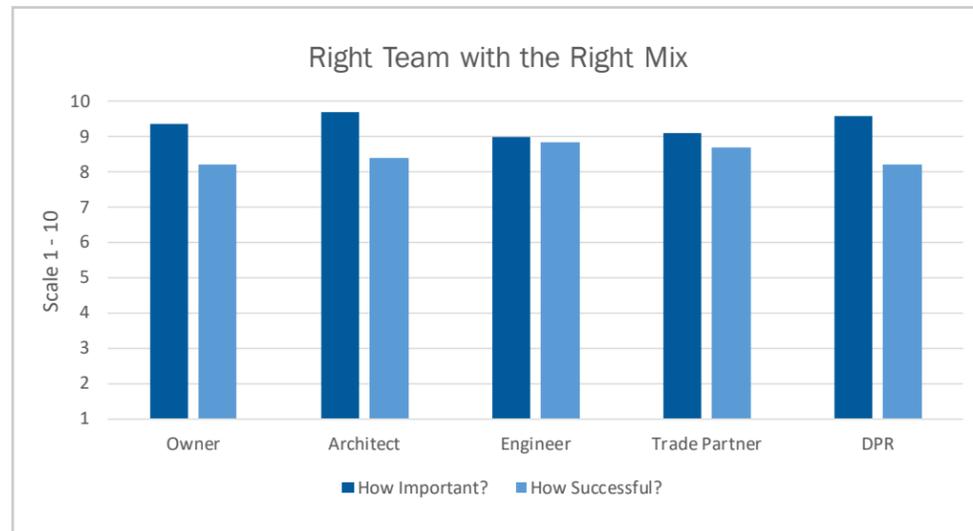
— OWNER PROJECT MANAGER

3

Right Team with the Right Mix

Make a continuous assessment of team dynamics and re-calibrate along the way. The right mix of people and leadership instinctively adapt and self-check. Exceptional teams put processes in place to respond and recalibrate.

- **Single strong decision-making structure.** A small leadership group, ideally with one point of contact for the owner, design team and build team that meets regularly is empowered by their organization to make decisions “in the room” and stick to them.
- **Eliminate silos to develop a fully committed and willing team.** Eliminating silos enhances the team dynamics and deepens trust when a team “has each other’s backs.” It is not about the “who” and is all about finding the best solution.
- **The mix is always changing. Transitions with the team are part of the life of a project.** On-boarding is critical and goes beyond just getting up to speed on the project. It is also the opportunity to set the expectations that are unique to the project.
- **Intrinsic motivation of the individual team members.** This trait is a defining characteristic of high performing individuals.



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I have seen projects with the right team in place but are not successful. You need to take the time to understand why people are the way they are.

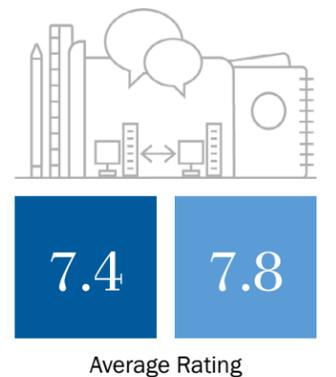
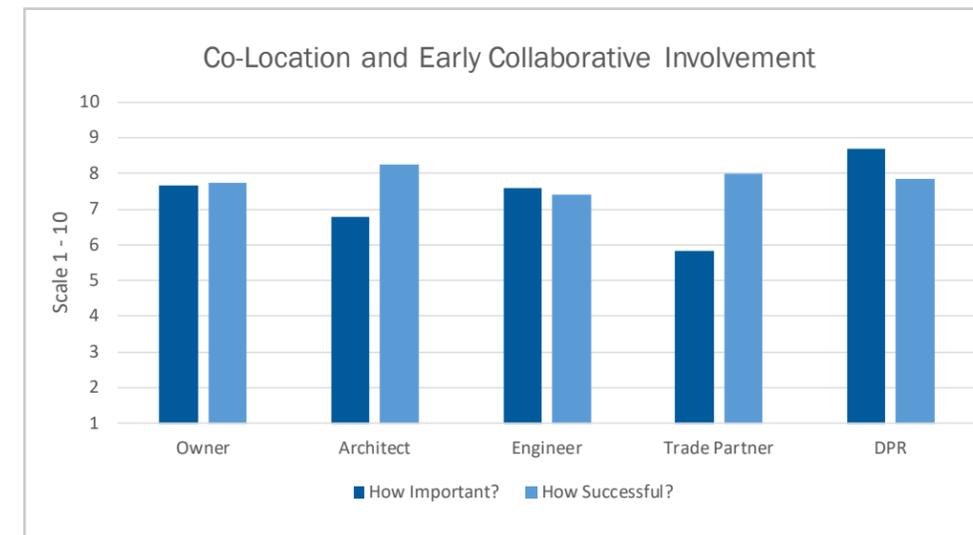
— TRADE PARTNER PROJECT MANAGER

4

Co-Location and Early Collaborative Involvement

Co-located “Big Rooms” and early collaboration require commitment from the very beginning. Although co-locating does not apply to all projects, in this study, two-thirds of the projects co-located, and those teams agreed that it was foundational for project success. If not formally co-locating, early collaborative commitment binds a culture of teamwork, communications and effective work flows.

- **Big Rooms (in-person, virtual, or hybrid) take communication to a new level.** In the Big Room, you don’t leave a message for your team members, you talk to them. Huddles are created naturally, and problems are resolved on the spot.
- **Make it a place where people want to be.** Done right, the Big Room becomes a project community and builds a culture that the team lives by. Create a place where the team can go to effectively get work done and also feel part of a purposeful team who cares about the success of each other. Leaders must be present and set the example.
- **Agree on team clusters and meeting schedule.** The teams should agree on the tools, implementation, team clusters and times for schedule based on what is best for that project team. Don’t be afraid to experiment and adapt to what is right for the project.



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Literally—it was a Big Room. Figuratively—the environment was great. All problems were approached as ‘how do we solve this together.’ Never, ‘this is your problem.’

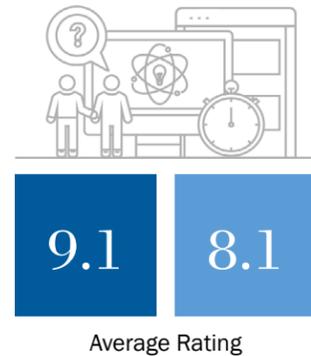
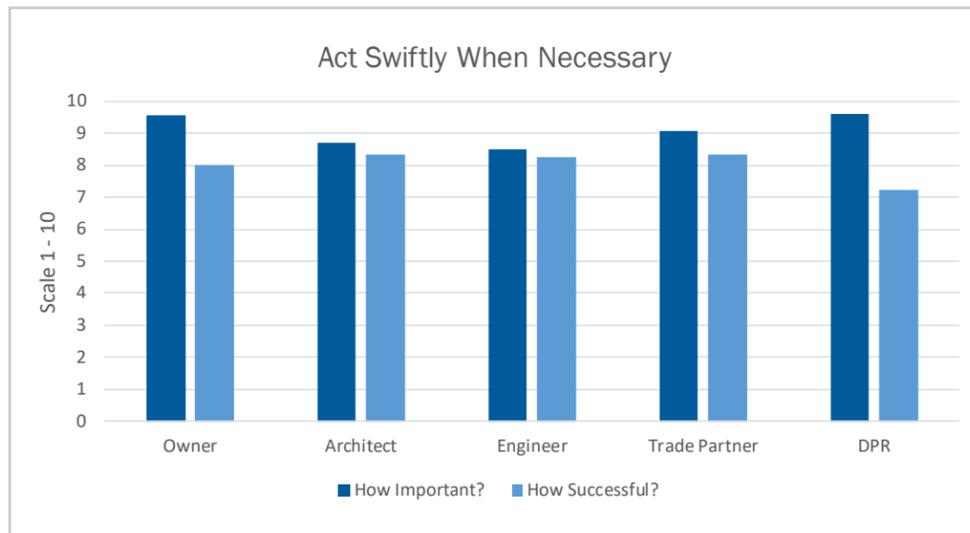
— TRADE PARTNER PROJECT MANAGER

5

Act Swiftly When Necessary

Be ready to act swiftly when necessary. When someone on the team is not aligned with the goals, processes or general needs of the projects, it will have a negative compounding effect. Being willing to make a difficult change at any point in the project makes a difference in ultimate project success. Be transparent as possible with the entire team as to why decisions are made.

- **Don't let things fester.** Once something is awry, it will not just go away. The sooner you make the appropriate change, the sooner you will get back on track.
- **Deferring decisions is detrimental.** Lack of decisions slows everyone down. Sometimes the only way to pull out of the quicksand is to force a decision.
- **Adjust with agility.** A high performing team adjusts to the challenges. When the team understands the common goal, they are willing to be flexible in order to achieve it.
- **Use a decision making log.** Implement a defined and agreed upon decision making process. Use A3's and A4's for a process and problem solving approach and track decisions in a place accessible by the whole team. Decisions need to be agreed upon and memorialized for all to see.



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I ended up using the ‘90% rule’ of evaluation to make some of the decisions that had been deferred, and that got the team back in motion.

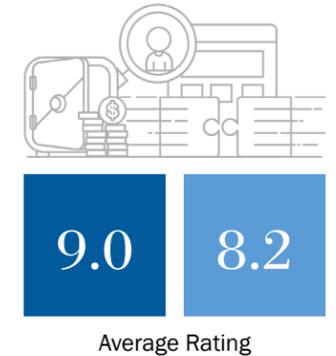
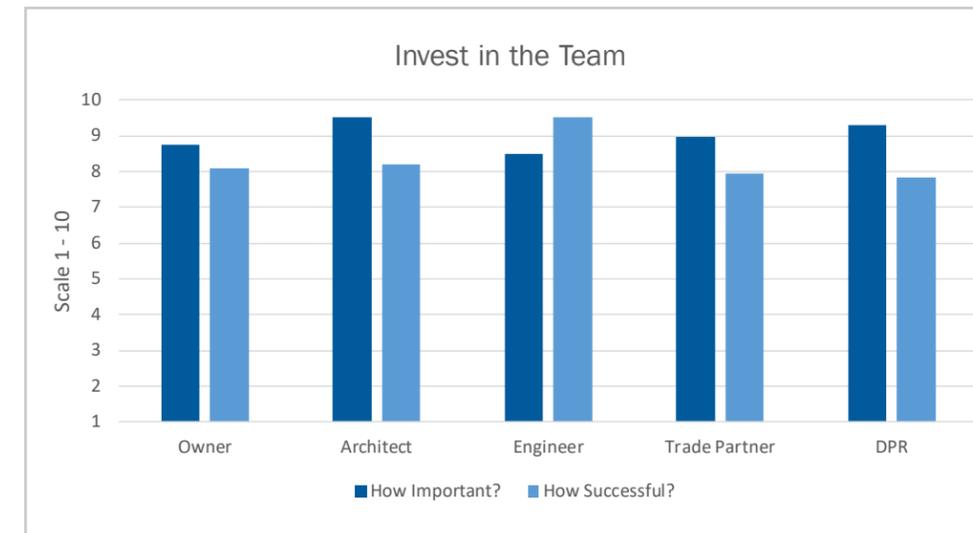
— OWNER PROJECT EXECUTIVE

6

Invest in the Team

Investment is pausing, taking the time and providing the resources. Ongoing team building leads to better cultural dynamics. Highly successful teams make the time to frequently hit the pause button, identify needed improvements, and regenerate.

- **Pause for significant project milestones.** Performing team retrospectives when significant project milestones have been accomplished offer team members a moment to look back and consider how outcomes compare to expectations or desires. Some of the most meaningful retrospectives are performed by a neutral facilitator who can deal with challenging topics in a positive manner.
- **Whether formal or informal,** planned time away from the day-to-day grind allows for a deeper interpersonal dynamic and culture to take hold.
- **Monthly Team Health Assessments** are a simple tool and process to determine if the team is performing as agreed upon. It is also the “voice of the team” which surfaces specific improvements from individual team members and provides an opportunity to put an action plan together.
- **Celebrate wins.** Long complex and technical healthcare projects can often be a grind. Be sure to hold team building events, celebrate milestones and celebrate key team project wins.



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The team became like a neighborhood—we became friends and everyone came together as a community to provide something exceptional.

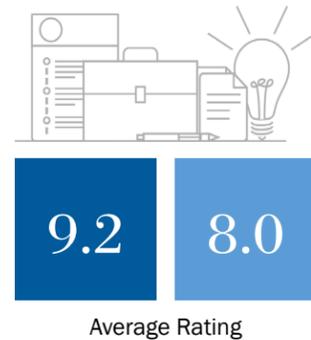
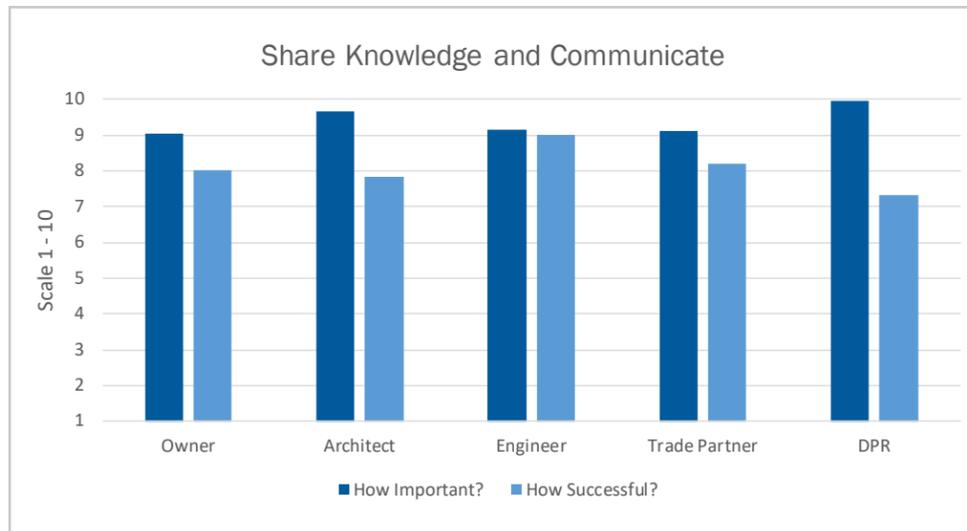
— OWNER PROJECT EXECUTIVE

7

Share Knowledge and Communicate

The sum of shared knowledge is greater than the sum of any individual's knowledge. It starts with good and frequent communications between the entire project team. Transparency and trust is vital. Sharing project metrics openly with the team adds to team cohesion and team energy is renewed with milestone successes. This is critical to how trust is initiated and maintained on projects.

- **Implement daily huddles.** Especially during the design phase. Huddles create a quick avenue to talk about what is happening that day, work completed the day before, and gives individuals a chance to ask for help.
- **Make it visual.** For example, during the design phase, a white board drawing of a thermometer showed on-going estimate adjustments to make budget. It gave everyone quick knowledge and buy-in to getting to the top (or bottom!)
- **Document the learning journey.** Sharing both the good and the bad is a must. Being transparent and honest in sharing information are the building blocks for trust.

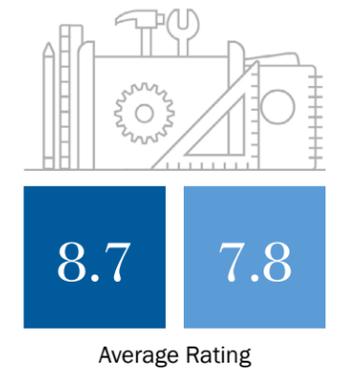
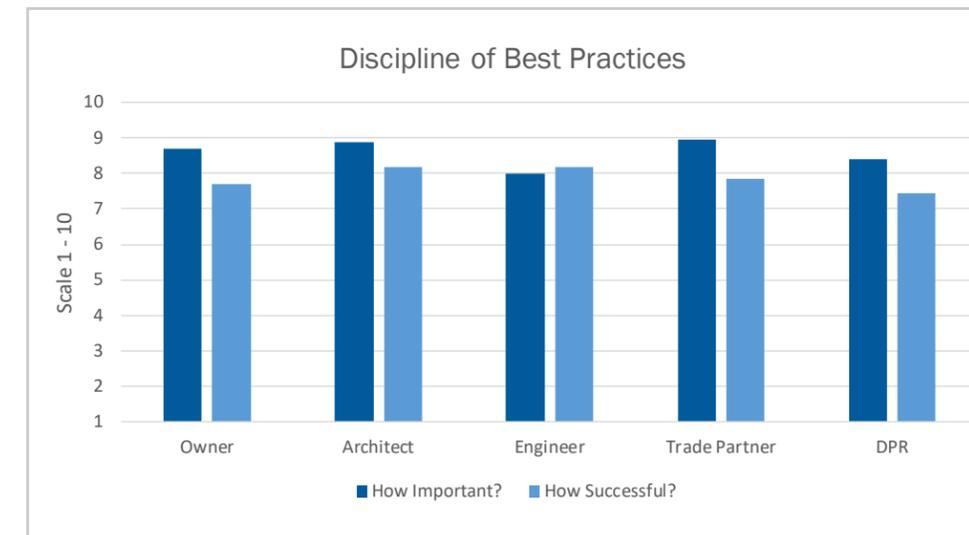


8

Discipline of Best Practices

Take advantage of established and emerging best practices. There is a plethora of previously-developed tools that can be adapted to fit a specific project. Lean Construction Methods tools such as Pull Planning, Target Value Design, A3/Advantages Decision-Making and portable technology are some of the items frequently mentioned on successful projects.

- **Simple things make a difference.** Fly-overs and embedded video in weekly reports help the team members who are not on-site during construction stay apprised of project progress.
- **Best practices can be shared by all.** Sophisticated trade partners bring a new level of awareness and practices to the job site. Shared leadership will allow everyone to have a voice.
- **Agree on the tools and practices.** Each team should agree on what tools practices will be incorporated into the project, how they will be tracked and reported out to the entire team.



DPR created a TAKT schedule to visually represent sequencing and printed it on pocket cards that were handed out to everyone. It was so simple and the results were amazing.

— CONTRACTOR PROJECT EXECUTIVE



Little things like slipping drawings underneath glass on a conference table on which you could draw, and bigger things like dedicating a full time person to financials and change orders made a big difference.

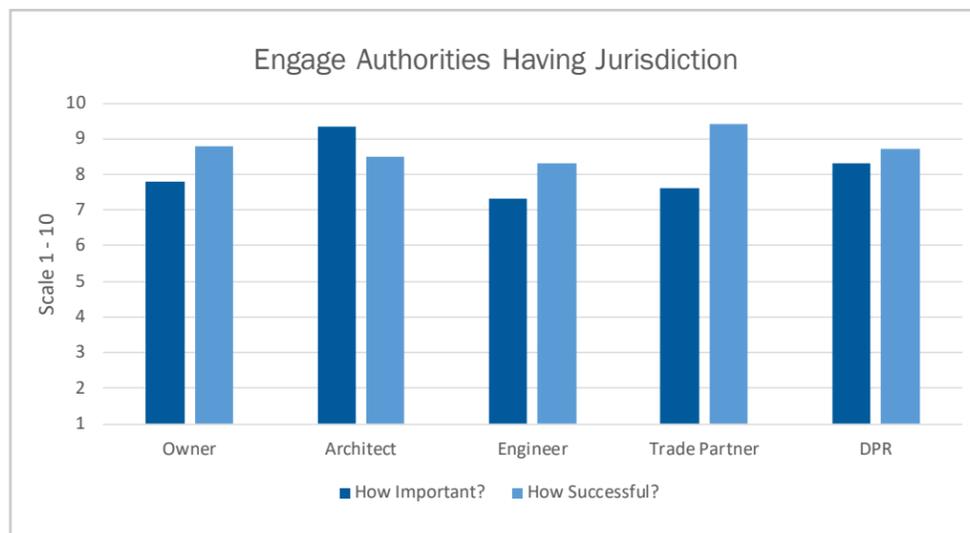
— OWNER PROJECT EXECUTIVE

9

Engage Authorities Having Jurisdictions

Understand, accept and work with regulations. The Authority Having Jurisdiction (AHJ) is responsible to verify the building is safe for everyone; they are not trying to be difficult. When they are integrated with the team and considered a team member, clearer communications, understanding and even trust develops. The fact that the study shows a higher success rating over importance is indicative of the competence with which project teams handle the AHJ.

- **Know who the AHJ is and what codes it is enforcing.** Continue to confirm the current code on long projects, as it could change.
- **Have a designated point person** from the architect and contractor as champions and have them retain documentation of correspondence and inspections
- **Early involvement.** Meet with the AHJ as early as possible, understand the policies and procedures and follow-up accordingly.



Conclusion

As Part 1 of this study revealed, successful construction projects are based on a community of collective behaviors by a team of **People**, following prescribed **Processes** and utilizing available and developed **Tools**. The alignment of these behaviors point to 9 Indicators that elevate project success.

- When there is an **alignment** of collective behaviors, project success is more likely
- These **collective behaviors** fall within the broader categories of People, Process and Tools and their intersection 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. “Everyone is all in.”



DPR put one person in charge to coordinate all the various permits and things went very smoothly.

— OWNER PROJECT MANAGER

Conclusion *(continued)*

This new study validates these 9 Indicators. The defining aspect of this study is the connection between the in-depth qualitative interviews with quantitative data collected. By correlating the number of times a success behavior was mentioned with the relevant Indicator and its ranking for importance, it is clearly shown that **the purposeful behaviors of a project team—and a community built around these behaviors—form the foundation for a project’s success.** Collectively, four of the indicators are especially prominent on successful projects. The projects with exceptional success (beyond cost, schedule and quality) consistently exhibited these behaviors that align with the top indicators.

KEY INDICATOR	Behavior	Total Repetitions	How important?
Team Aligned with Project Mission and Goals	<ul style="list-style-type: none"> • A culture of “no one fails” promoting a fully willing, transparent and idea generating team • Everyone listened • Looked for innovation • Worked through good or bad, “no who” • Company culture and values alignment 	40	9.2
Right Team with the Right Mix	<ul style="list-style-type: none"> • Partnership with owner and team—considered as partners; core to trust • Collaborative • Considered team as individuals, family • Built friendships • Repeat work using same strategies; same team; work together again • Superintendents made a difference • Over and beyond; can do attitude; passion; responsive 	33	9.4
Share Knowledge and Communicate	<ul style="list-style-type: none"> • Transparency with issues and surprises; level playing field • Communicate across teams / cluster groups • Coordination and daily huddles—everyone knowing what is happening today, where to go and what to do; collaborating with trades 	30	9.2
Truly Engaged and Decisive Owner	<ul style="list-style-type: none"> • Engaged owner—one point of contact with defined role and ability to make decisions • Buy-in with owner leadership and the leaders setting the example • End user participation and engagement 	17	9.6

This dynamic study will continue to be validated.
 As we adapt in an era of accelerated change,
 these purposeful behaviors and indicators are even
 more relevant today for project success.



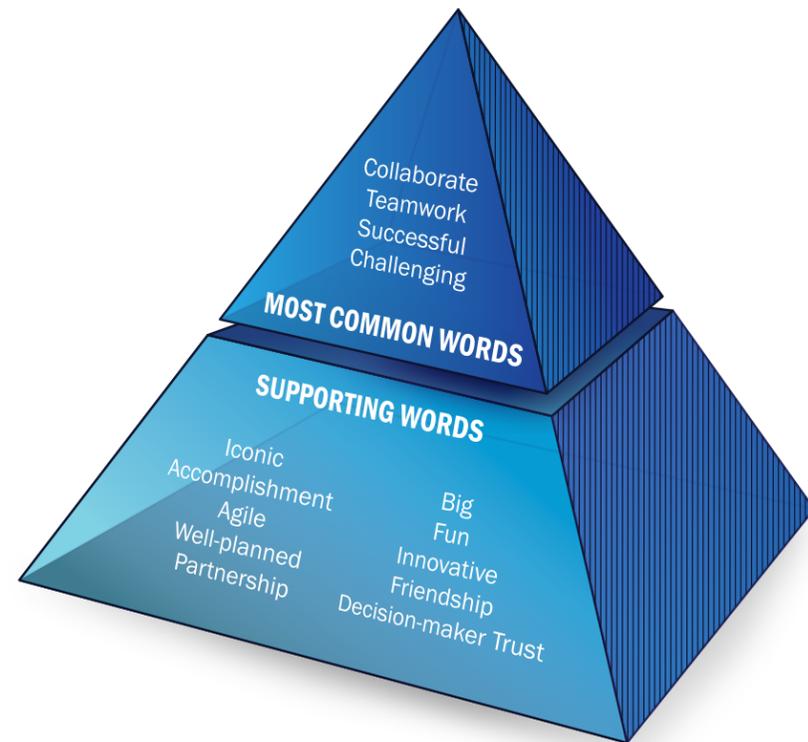
We are surrounded by technically competent firms and people and there are no knowledge gaps. It is who can effectively put talent together and then leverage the synergy in always seeking better ways and solutions that make the team an A-team.

— OWNER PROJECT EXECUTIVE

Appendix

Successfulness and Project Patterns. The study collected perspectives on success from both DPR's external partners and internal team members. Each in-depth interview started with general questions—what success looks like and what success means and then delved into why was a project successful or why not?

What Words Come to Mind? Many similar words were repeated during the interviews, depicting the highlights and the realities of healthcare projects. Just as healthcare facilities themselves are very complex, so is the process for creating them. “Challenging” and “tough” are words that often co-mingled with successful, collaborative and trust. The very nature of the project's complexity led to team members' greater feelings of satisfaction and the sense of accomplishment of having an impact on improved patient outcomes and contributing added value for the community.



Appendix (continued)

Define a Successful Project. The traditional success benchmarks of cost, schedule, quality, and meeting project goals are now just a baseline for defining success. This study group declared that success encompasses much more. Team dynamics and long-term relationships are very significant elements. The teams on the most successful projects are eager to work together again and value the opportunity to do repeat work with the same owner. A particular sense of pride of accomplishment was repeatedly expressed, as well as an awareness of the importance of collective goals being met for the entire team. Team members became personal friends—a highly valued by-product of working together for an extended period of time.

DEFINITION OF SUCCESS—TOP REPETITIONS IN PRIORITY ORDER

1. Happy team at project completion
2. Quality, schedule, cost, safety
3. Meets goals
4. Financial success
5. Improved patient outcomes
6. Community pride
7. Great relationship, transparent, collaborative, partners
8. Want to work together again
9. End users were engaged and happy with end product

Appendix (continued)

Was the Project a Success? Why or Why Not? There were varying degrees for affirming success, from a simple “yes” to an exalting “exceeding,” “absolutely” and “project of a lifetime.” Successful teams worked together through the good and bad, within a culture of “no one fails” and “all in.”

More than anything, “communication” defines success. With steady and consistent communication, a fully willing, transparent and idea-generating team is fostered and rises to the occasion.

WHY WAS IT SUCCESSFUL? TOP REPETITION IN PRIORITY ORDER

1. A culture of “no one fails”; a fully willing, transparent and idea generating team
2. Early planning; expectations set early; preconstruction efforts
3. Constant communication
4. Coordination and daily productive huddles—everyone knows what is happening
5. Work through the good or bad—no “pointing fingers”
6. Partnership between owner and team—collaborative; develops and maintains trust
7. Meets the owner’s goals; happy owner

No projects were deemed unsuccessful; that is, all of the study projects ultimately finished successfully. However, there were elements that were challenging on several projects.

WHAT WERE THE CHALLENGES? TOP REPETITIONS IN PRIORITY OF ORDER

WHAT WERE THE CHALLENGES? TOP REPETITIONS IN PRIORITY OF ORDER	RESPONSE
1. Schedule	Confirm and communicate daily
2. Staff Transitions	On-boarding is critical
3. Owner changes	Document for all and align with project goals
4. Lingering closeout	Bring in a fresh team especially on long projects

Appendix (continued)

Patterns. A repeated reason for why a project is successful was an **aligned culture between all team members.** This culture promotes a team that works together through the good and bad. Even when projects had challenges along the way, “**no finger pointing**” was mentioned multiple times. Strong team relationships and support for working together are clearly prime indicators for project success.

Good and frequent **communication** with all team members **is a key to project success.** It may seem obvious, but it is a consistent basic feature on successful projects. It enables the best possible coordination and an awareness by the entire project team about what is happening and why, about where to go and what to do on a daily basis.

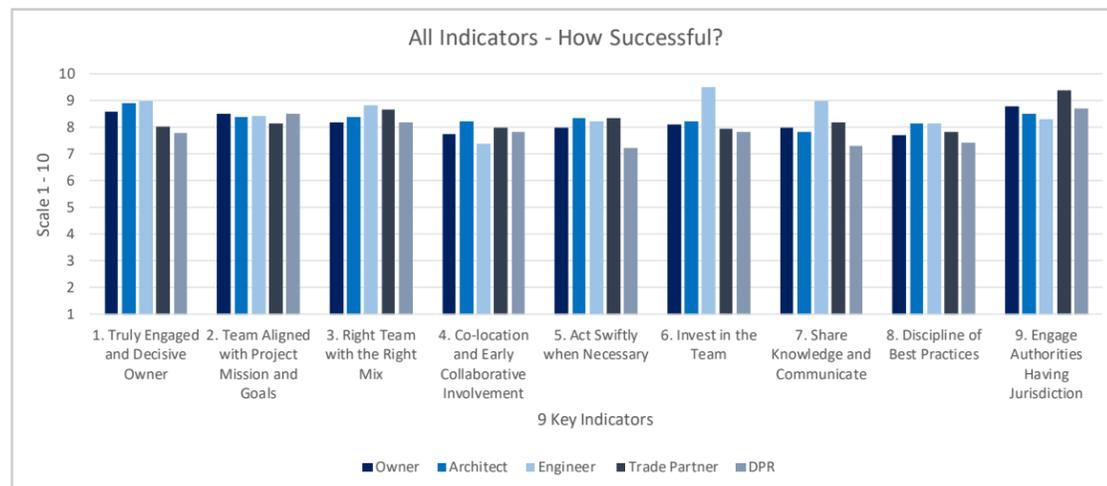
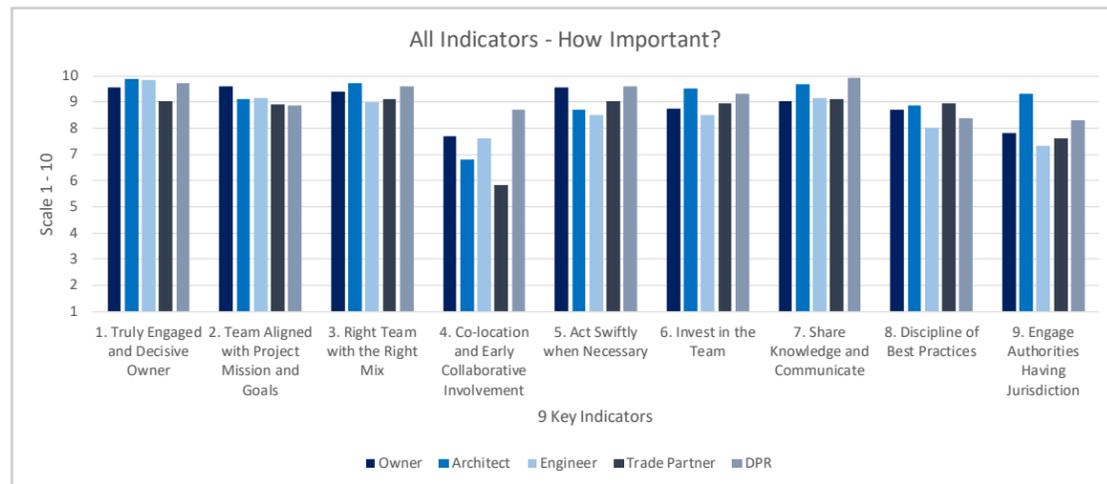
An **engaged owner,** empowered to make decisions is another pattern seen on the most successful projects. When that engaged owner interacts regularly and is in sync with the architect and contractor, an alignment and synergy is created that propels the project to the peak level.

Other Integrated Project Delivery (IPD) behaviors were noted, such as project-first thinking, no silos, the use of Lean practices such as pull planning and continuous improvement. **But there’s no better word than trust.** When trust, one of the most basic prerequisites for IPD, is cultivated on a project, it seems that things fall into place. Trust captures the “all in” mentality. Communications are then able to occur at a different level—teams can just talk to each other without fear, knowing ideas can be presented and assessed under the construct of “no bad ideas.”

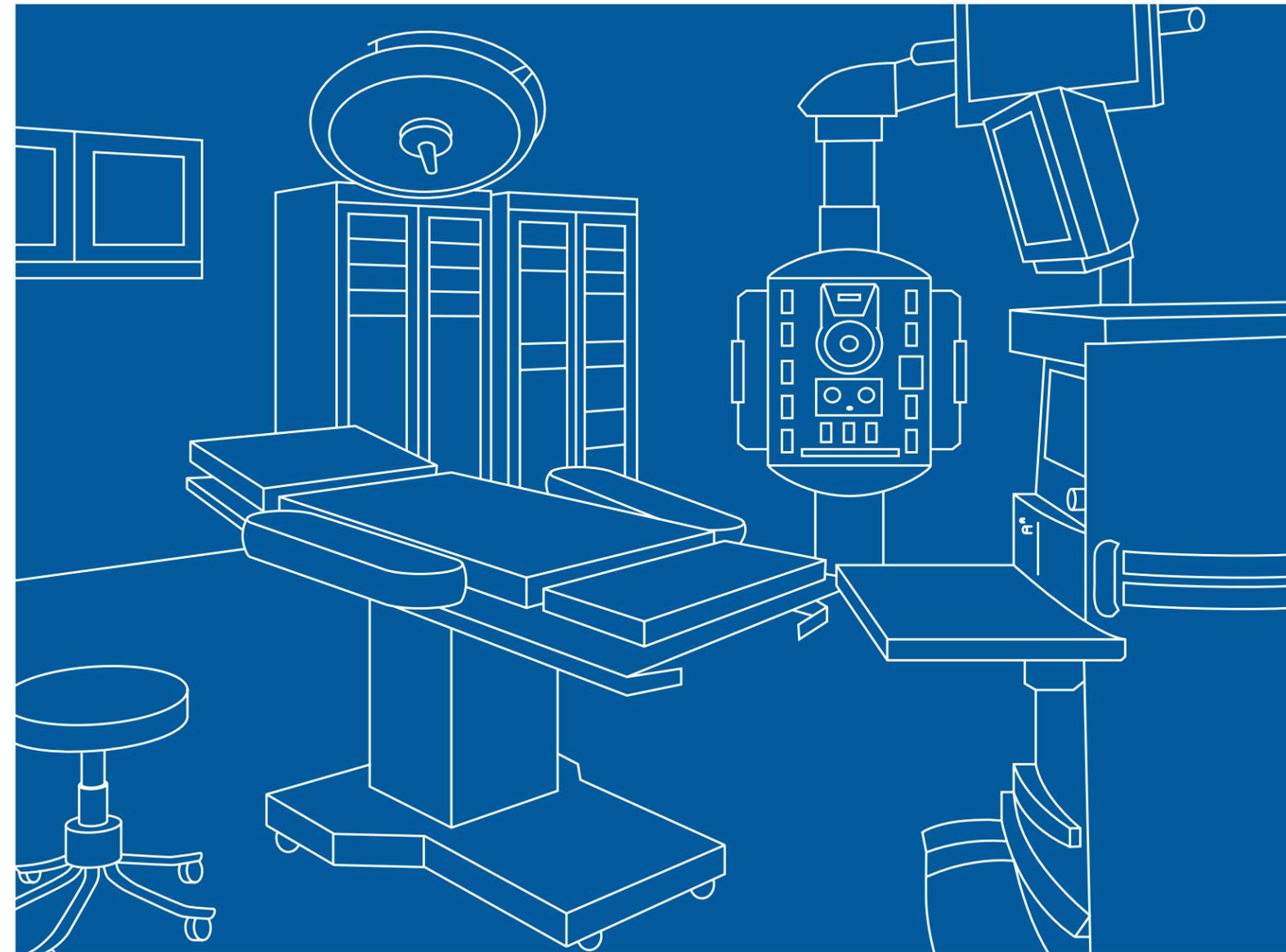
Appendix (continued)

When the rankings are broken down by role on the project, it is evident that DPR teams relate and value the indicators as much, or more than other team members. Perhaps they are more familiar with them, from being exposed to the first phase of the study or because so many of the indicators are essentially DPR Best Practices. The biggest differential is demonstrated on co-location importance to all parties other than DPR, and especially to trade partners. Also, Authorities Having Jurisdiction importance appears less important to engineers and trade partners. Both roles may be less involved than other parties on the project.

The Success rankings are led by the engineers who see (or acknowledge) the most success overall and much more than the rest of the team for Invest in the Team and Sharing Knowledge and Communicate. They are in a unique position to have the most interaction with both the Design Lead / Architect and the Trade Partners.



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 global 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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