

Project Management and High-Value Superyacht Projects: An Improvisational and Temporal Perspective

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ABSTRACT ■

This article considers specific elements of the project management of high-value deliverables in an under-researched sector. Specifically, it looks at ways in which change is accommodated in complex projects where scope, delivery, and cost are relatively inflexible. An emerging literature considers improvisational working within project-based work, which dilutes the “plan, then execute” paradigm that has shaped project work for some time. This research contributes to the temporal and rhythmic aspects of work in this area, linking with extant theory on, among other areas, punctuated equilibrium and organizational “rhythm,” and identifies parallels between improvised project work and established academic theory.

KEYWORDS: improvisation; time; project management; superyachts

INTRODUCTION ■

The use and abuse of projects to accomplish work within organizations is widespread, and it is an area that is attracting greater interest as the recognition of the benefits of project-based work is becoming more pervasive, and as research into projects is becoming more accepted within the wider academic landscape (Cicmil & Hodgson, 2006). Projects are supposedly used to achieve nonrepeatable and arguably unique outputs, although it is now accepted that project-based principles are applied to many other types of work within organizations, especially where change is endemic (Williams, 2005). This research¹ investigates one aspect of project-based management in a fundamentally under-researched sector.

A sector where project-based techniques are used extensively is in the construction of high-value “superyachts.”² A number of shipyards worldwide are involved in this expanding global market, and these yards act as “lead suppliers” for the delivery of complex, bespoke products where a significant network of suppliers, managed by a project manager (or, more often, a number of project managers) come together to design, build, and deliver a customized vessel for an individual customer. It is normal within such projects to have multiple project managers representing different stakeholders (lead contractor, owner, designer, naval architect, interior designer, etc.), with redesign and changes to specification being managed on an ongoing basis throughout the build schedule.

At this point, it would be useful to discuss (although not define) the nature of the “superyacht.” The market for luxury pleasure yachts—usually, though not exclusively, motor yachts—has been in existence for more than a century, although the more sophisticated craft commissioned recently have emerged from a global growth in individual and corporate wealth, with major growth over the last decade or so shifting from Europe to North America, and to Russia, where significant personal wealth has been generated since the relaxation of communist principles. Historically, a superyacht was considered to be a bespoke pleasure craft of between 40 and 50 meters in length, with larger yachts being relatively rare. Over the last decade, however, the size of such yachts has grown, with 60 meters to 80 meters having become more common, and craft of more than 100 meters emerging, at a unit cost estimated to be in excess of £100 million (US\$160 million; although cost tends to be a secretive issue with larger projects in this particular marketplace). There are also limited facilities worldwide where projects

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² Those unfamiliar with the “superyacht” descriptor may wish to visit www.lurssen.com or www.feadship.nl to gain an insight into the complexity and magnitude of these products.

Project Management and High-Value Superyacht Projects

of this magnitude can be executed, so demand for large-build “slots” is high.

This is also an industry with a large volume of activity. It is estimated that more than 200 new yachts are built each year, though only about 10–15 exceed 60 meters in length. However, at an average cost of £75–100 million (US\$120 to 160 million) and often much more, plus the cost of maintenance, running costs, and infrastructure and other support, this is a sector with activity measured in multiples of billions (£ or \$US). The additional activity in smaller but still high-value product adds many times this figure to the total market. Historically, this sector has also been relatively resilient to cyclical peaks and troughs in demand, although current recessionary pressures are now starting to adversely affect the sector.

Having broadly contextualized the marketplace, it is now time to consider the contracts to construct such yachts in project terms. If we adopt the accepted premise that projects are used to achieve “one-off” and relatively nonrepeatable tasks and activities (Partington, 1996; Turner, 1999), where performance is usually measured or assessed on the basis of time, cost, and scope or quality (Atkinson, 1999), then the construction of bespoke superyachts is a useful sector to investigate. Such projects are of high value, where quality is paramount, and the build contracts tend to be documented in terms of fixed-price, fixed-delivery-date contracts that are rigorously documented and enforced. Essentially, the contractual negotiations attempt to resolve a “tension” where the builder is attempting to shift risk from cost overruns onto the client, and the client is attempting to fix both price and the delivery date. The issue of changes is a particular difficulty, as larger contracts may take 6 to 7 years from conception to launch, in an industry where some areas of the technology are changing quickly, and the client usually wants the most recent technology installed at delivery. For this reason, the “*iron triangle*” (Atkinson,

1999, p. 338) of cost, scope, and time is specifically defined and contractually documented, and traditional means of managing flexibility within the project are severely curtailed. As a result of this, project managers often have to resort to improvisational working practices to accommodate required or unforeseen changes.

Given the current thinking that the project plan is only a starting point on the complex journey to a completed and delivered output (in this case, a superyacht), this contractual structure has the effect of negating flexibility within the project. Given that it has already been identified that redesign and changes to specification are common elements of such projects, there are difficulties implicit in the management of those unforeseen—and therefore unplanned—circumstances and requirements. The management of the tensions between responsiveness and control becomes particularly important in such circumstances, and improvisation skills are often employed. This makes the study of the project-based management techniques applied to the execution and delivery of such projects an interesting area for research. As has been previously mentioned, this is also a sector that is fundamentally under-researched in the academic sense.

This article therefore proposes to use a variety of data, including individual interviews with project managers and senior executives within the U.K. superyacht industry, together with project data and secondary data from within and outside the sector, to consider some of the challenges inherent in the project management of these complex projects. The focus will be on the way in which project managers in this sector attempt to circumvent the rigidities inherent in project planning and execution to meet the shifting requirements embedded in the delivery requirements for a complex and bespoke high-value product, and the temporal imperatives that influence decision making and action within such projects.

Literature Review

Although initially within this research project the intention was to consider improvisational activity within the project management of superyacht builds, it has become apparent that the project-based management of such undertakings also has significant temporal implications and is not a matter of documenting the breakdown of planned activity and a shift to improvised working practices. This review will therefore address improvisational work, and will also consider a number of temporal theoretical perspectives that have a bearing on the management of project-based work within the chosen sector.

From a philosophical stance, improvisation relates to how thoughts develop. Ryle (1979, p. 125) suggested that “the vast majority of things that happen [are] unprecedented, unpredictable, and never to be repeated,” and that “the things we say and do . . . cannot be completely pre-arranged.” To a partly novel situation, the response is necessarily partly novel, or else it is not a response. Ryle’s assertion is that however much an activity is planned, there will always be a novel set of circumstances to deal with, and that improvisation requires using resources that are available to resolve unforeseen circumstances. This is the essence of bricolage (Lehner, 2000), which derives from and is defined by the work of Levi-Strauss (1967), who describes it as the requirement to make do with those materials that are available. As improvisation within the project domain often requires rapid action to meet unforeseen requirements, it is logical that in such instances, there is little opportunity to mobilize additional resources. Bricolage can, of course, also occur in nonimprovisational contexts, and not all improvisation will involve bricolage. There is, however, evidence that successful improvisation is often more effective if the improviser (the project manager or project team member in the project context) is an effective

bricoleur (Lehner, 2000). This skill, creativity, and intuition are the first three essential components of improvisation (Moorman & Miner, 1998a).

Some early work alludes to improvisational styles of working, both generally (Weick, 1979) and on “immediate action” within the project domain (Kerzner, 1979). From the mid-1990s onward, the literature on improvisational work practices within organizations began to emerge, adopting Ryle’s stance and applying it to organizational routines and processes. Some of the outcomes from these debates apply metaphors to explain the way improvisation is used; for example, adopting and applying ideas from jazz performance (Barrett, 1998a, 1998b; Eisenhardt, 1997; Hatch, 1998, 1999) and from improvisational theater (Crossan, 1997; Kanter, 2002; Yanow, 2001). Later work used grounded theory approaches to consider the temporal aspects of improvisation, and particularly pressure to achieve complex tasks to a demanding or compressed timetable (Brown & Eisenhardt, 1997; Moorman & Miner, 1998a, 1998b). This work is building the foundations to allow empirical research of a more positivist nature—for example, Akgun and Lynn’s (2002) work on the links between improvised new product development and speed-to-market. Consideration has also been given to the interactions between improvisation and learning (Chelariu, Johnston, & Young, 2002; Miner, Bassoff, & Moorman, 2001) and improvisation and entrepreneurial activity (Baker, Miner, & Eesley, 2003; Hmieleski & Corbett, 2003), and the ways in which tacit knowledge (upon which intuition, and therefore improvisation, may draw) is acquired (Koskinen, Pihlanto, & Vanharanta, 2003), as well as the role of experience in the acquisition of tacit knowledge (Cooke-Davies, 2002).

More recently, recognition has been given to the use of improvisation within project-based work (Gallo & Gardiner, 2007; Kanter, 2002; Leybourne, 2002, 2006a, 2006b, 2007; Leybourne & Sadler-Smith, 2006). Generally speaking, this

body of work considers improvisation in terms of an association with urgency, where there is a need for action and little or no time to plan, or to generate and examine alternative courses of action. Within this research, however, the focus is on deviation from what is originally agreed, but often the improvisational nature of any solution is due to a need to meet delivery targets that are some time away, indicating that bricolage is not always the predominant requirement.

It has already been stated that the design and build of the product can take 6 to 7 years, and a typical “physical” build will take 3 years, but with the potential for a different and possibly uncertain end product. This generates temporal pressure within the project. The client will often request changes to interior trim and materials, audiovisual and electronic equipment, or fundamental layout requirements, according to changing fashion. Advances in navigation and monitoring electronics may trigger the respecifying of requirements in these areas, involving renegotiation with subcontractors and the renegotiation of supplier contracts. This activity usually occurs toward the end of the build, resulting in compression of timescales and additional complexity, which has to be resolved.

This leads us to the consideration of time in organizations. A comprehensive review of temporal issues was undertaken and documented in Bluedorn and Denhardt (1988), which examined time and the way it interacts with and influences organizations from a number of different perspectives. Of particular relevance are three studies that have linked time pressure to performance. Work by Kelly and McGrath (1985) and Peters, O’Connor, Pooyon, and Quick (1984) demonstrated increased performance as deadlines shortened temporally. Andrews and Farris (1972), in an earlier study, concurred with these findings but found that as deadlines drew very close, performance declined, presumably because they could not be met.

This is also a common anecdotal occurrence within projects. There is, however, evidence to suggest that time within projects is being considered in a more innovative vein (Rämö, 2002), in that “clock” time is being superseded by “economic exchange” time, or time considered in terms of Drucker’s (1974) division between efficiency and effectiveness. Arguably, these conceptual appreciations of time can assist in “extemporaneous situations that must be handled swiftly, without relying on running-in periods or (non-existent) formalized decision-making processes” (Rämö, 2002, p. 570).

There are also other temporally oriented areas of the extant literature that resonate with project-based work, notably Romanelli and Tushman’s (1994) work on punctuated equilibrium. This research suggests that organizations evolve “through relatively long periods of stability (equilibrium periods) in their basic patterns of activity that are punctuated by relatively short bursts of fundamental change (revolutionary periods)” (Romanelli & Tushman, 1994, p. 1141), building on the work of Gersick (1988, 1994), which identifies a similar phenomenon in a number of areas, including biology, sociology, and psychology. Evidence also exists of this broad pattern emerging at the project level (Gersick, 1988, 1989).

Ciborra (1999) suggested that improvisation may be seen as “an extemporaneous process, open[ing] up alternative approaches to cope with time in business” (1999, p. 77). The suggestion here is that improvisational working allows movement away from the constraints posed by “clock” time. Indeed, Ciborra makes the point that “ex tempore” literally means “outside the flow of time” (1999, p. 78). The inference here is that traditional or “clock” time is transcended by improvisational activity, supporting work by Crossan, Lane, Klus, and White (1996) that suggests that plans and procedures are more abstract, whereas improvisation delivers in real, or possibly “economic

Project Management and High-Value Superyacht Projects

exchange,” time, in that improvised work is intended to deliver tangible time and cost benefits.

There is also a view that organizations adopt a “rhythmic” pattern, and that the rhythm of an organization represents a fundamental aspect of organizational identity (Bunzel, 2002). Evidence is presented of “rhythmic consciousness,” seen as creative, intentional activity capable of integrating nonperiodic events. In the context of organizations, rhythms can also be construed as “calls for action,” and as forms of discipline or temporal triggers (Bunzel, 2002, p. 179). The repetitive nature of rhythms within organizational life may act as indicators of expected actions, possibly to meet organizational expectations. An example of this could be an annual “planning” cycle, which triggers planned actions. Alternate concepts of time may be more appropriate to orchestrate responses to unforeseen problems or occurrences. This would fit well with the theoretical underpinnings of improvisational work (Cunha, Cunha, & Kamoche, 1999).

Methodology

This is a broadly qualitative study, with a range of data collected over approximately one year from two of the three main recognized superyacht construction and refit facilities within the United Kingdom. Some initial and exploratory discussions also took place with the third (and largest) shipyard, but they withdrew from the study at an early stage because of concerns over confidentiality of their client base. This was a perennial difficulty in this study, as almost without exception the participants in the study were concerned about the effect of the outcomes of the study on their carefully and sensitively nurtured client relationships. This study is, however, concerned with process, and not product, and data was gathered on that basis and extensively anonymized.

Three or four project managers at each of the participating yards were interviewed, ranging from recently

appointed personnel to one manager with more than 20 years of industry project management experience and one who had spent his entire working life at the same yard. Senior executives and directors at the yards were also interviewed, including the chief executives of two yards. These interviewees were intimately involved in negotiating and managing the relationships between clients themselves as lead contractors and subcontractors.

The interviews followed a semi-structured format, resulting in more than 200 pages of transcripts, and the chosen schema was based on and structured by a predetermined set of open-ended questions. This allows flexibility to pursue and probe responses, and for the discussion to be led at times by respondents, while retaining a level of structural integrity, which contributes reliability and validity to the study. The discursive interview-based data was recorded and transcribed professionally.

Additional data was drawn from documented project plans and other formal documentation within the participating organizations. Information from formal and informal meetings and discussions was also gathered, and this assisted in contextualizing some of the issues and problems that arise during complex and high-value project-based work. In addition, industry data was drawn from a number of sources, including the sector-specific technical press.

Some criticism surrounding qualitative research stems from the unstructured manner of subsequent analysis. Computer-aided qualitative data analysis software (CAQDAS) such as Nvivo was considered, but because of the diversity of the discursive and other data, manual analysis was used. In order to add rigor to this study, the interview and other data were analyzed following a process based around the Huberman and Miles (1998) interactive data analysis model, using an iterative approach based around the cycle of data collection, data reduction, data display, and

conclusion drawing. The iterative element results in constant refining and reinterpretation of the data, and the combination of discursive and documentary data adds an element of triangulation, ensuring that results are confirmed by multiple data sources and types, and adding further to the rigor and reliability of the research outcomes.

Findings

Consideration of the various data generated by and for this study indicates a number of novel, confirmatory, and other findings. Some of these outcomes engage essentially with the literature relating to project and program management, and the management of project-based work. Other aspects of the findings are more closely related to the emerging improvisation and “agile project management” literatures, and there are also links to a number of other pieces of extant theory, especially those of a temporal nature.

The decision to use improvisational working practices “purposefully” as an intentional means of managing innovation and change is a wholly proactive stance and an extension of the views of Crossan et al. (1996) and Cunha et al. (1999). There are, however, many areas of organizational theory and practice to be considered in adopting this stance, including those of trust, motivation, control, and culture. Ciborra suggested that:

Improvisation has to do with moments of vision, where a sharper insight into the world takes place, as well as a better understanding of ourselves-in-the-world. Such moments of vision lead our Being to express itself in a “project of action” that precipitates (suddenly, according to clock time) into a “decision.” (Ciborra, 1999, p. 89)

The inference here is that during immersion in a problematical situation that needs resolving immediately, employees will draw on past experiences, intuition, the resources they have at hand, and an element of creativity,

and will resolve the problem in the way they feel will be most effective. This is the essence of bricolage, which was identified by Moorman and Miner (1998a, 1998b) as one of the essential constructs of organizational improvisation. It is, however, important to note that the decision arrived at by applying improvisational practices may not be the “right” or the “optimized” decision, but it is the decision that the improvising employee deemed to be the “appropriate” decision at the time it was made.

The use of this aforementioned “library” of past experience may seem to sit problematically with a situation where a “bespoke” and unique outcome is sought. It may therefore be appropriate to explain at this point that the essence of effective superyacht builds is encapsulated in a need to “standardize” as many routines and design elements as possible, while still allowing for client freedom to express their individual and idiosyncratic requirements. Essentially, hulls and superstructures are built to a common design, although size and materials vary. Larger yachts do, however, tend toward a steel hull and steel or aluminum superstructure, although composite superstructures are becoming more common. Much equipment is supplied by third-party contractors (engines, generators, water makers, air conditioning plants, electronics, etc.). The way in which such equipment is located, installed, and incorporated into a bespoke vessel is also fairly standardized. It is therefore important from a cost control and efficiency perspective to follow a fundamentally standardized build model. Indeed, most yards try to standardize greater and greater proportions of the way in which yachts are built, in order to more accurately control accuracy in the “bid” process.

This has led to some very prestigious builders moving (for at least a part of their output) toward a product offering an almost standardized hull, superstructure, and equipment package that can be cosmetically and aesthetically customized, leading to cost and build

time savings. This “shift” in market behavior is very effective up to about 60 meters of yacht length, after which specific and custom client requirements appear to be more important, and client budgets appear to be less constrained. Over 100 meters, superyachts are completely bespoke, and this sector of the market is growing to the extent that few build “slots” are available in the next few years.

Turning now to the findings from this study, it seems logical to deal with the two elements of the work analyzed—new superyacht builds and refit work—separately, as there are fundamental differences in the way the work is approached and in the temporal rhythms that apply to the progress of contracts. Commonalities can, however, be identified across these two areas, and these are dealt with first, in order to assist with the ongoing contextualization of the study.

Commonalities

A number of significant practices and issues arose during this study that impinge on both new builds and refit work. First, and surprisingly, bearing in mind the value of these projects, it is apparent from the data that most of the project managers interviewed had little in the way of formalized project management training. This was confirmed in interviews with senior managers and directors. Additionally, those project managers tended not to have been on a career path that embraced project-based work, but instead, in many cases they gravitated to their positions by virtue of a combination of experience, time served, and a demonstrable ability in another area. Within one of the yards, there was an “ex-Lloyds surveyor,” someone who had started as an apprentice but came from furniture design within the yard, and two project managers that had come to the yard from captaining client yachts. Indeed, a director of the yard suggested, “I wouldn’t say we have one [project manager] who has gone and done a degree in project

management” and that “one of our more senior project managers has just come through the ranks, you know. He just happens to have 15 years’ experience and knowledge.”

The second area that appears to be common to both new-build and refit work is that change is a constant factor, and one that is not dealt with using traditional change control processes. At the extreme level on a new build, this change can be as radical as a client visiting after the hull has been built and deciding that the yacht is too small. On one of my visits to one of the yards within this study, they were in the process of cutting a fundamentally completed hull in half to add an extra five meters to the length for this very reason. Within the refit area, often-significant volumes of extra work are exposed during scheduled remedial work, or sometimes decisions are made during the refit schedule to add significant extra work. Indeed, one project manager suggested that with refit work, “it is more about decision making with what you find, rather than the detailed planning involved in new build work.” For this reason, refit project plans attempt to compress scheduled work into the first half of the schedule, to allow for unforeseen and often improvised accommodation of emerging requirements.

This entails a shift from the ideal of “standardizing” processes to a rather more reactive stance, where priorities and requirements change, and project managers are required to be flexible, and follow a more improvisational model. This involves a significant “trading” of resources between projects, sometimes on a formal and sometimes on an informal basis, with one project manager saying that resource allocation was “all pretty much a trade-off really; it is very much reactive.” This pooling of labor has a forum within the daily meetings that project managers have in one of the yards within the study, and there is evidence of significant trading of resources across and between both new-build and

Project Management and High-Value Superyacht Projects

refit projects to cope with unforeseen required activity.

Another significant issue in both new-build and refit work is the management of subcontractors. This appears to be partly because of the complex and bespoke nature of the work, and partly because in the United Kingdom many of the organizations that subcontract to the superyacht sector are small and financially exposed. One project manager suggested that “managing subcontractors is horrendous, absolutely soul-destroying, dreadful” and that “you end up absolutely micromanaging every single subcontractor, which is hugely time-consuming, and you never get what you want because you are not directly in charge of the guy because he ultimately works for someone else.”

This level of difficulty in managing small sets of workers undertaking complex and bespoke work inevitably adds to the layers of complexity and uncertainty in the management of this type of work, and tends to add to the level of improvisational activity that is required to meet demanding client and quality requirements in a sector where the complexity of the end product is increasing significantly. One technique being used increasingly in one yard is to employ individual workers from subcontractors on a medium-term basis and incorporate them into existing teams. As one project manager argued, “You have the quality control then, because your own guys aren’t going to accept the work of someone that is sub-standard, because they know it’s going to be entwined with what they are doing.” He goes on to say that in such an instance “we effectively subcontract labor but manage it as if it was our own labor.”

Having considered some of the issues that impinge on both new-build and refit work within the sector, it is now appropriate to consider the two elements separately, and document those issues that are more prevalent in one or another type of superyacht activity.

New Superyacht Builds

New superyacht builds are the type of work that builds prestige within the sector, as an impressive bespoke yacht acts as a significant advertisement for the quality of the output produced by an individual yard. This is even more apparent if the new owner is willing to allow the vessel to appear in the specialist superyacht press (i.e., in a glossy periodical such as *Boat International*, which is published in editions for the major markets of the United States, United Kingdom, Germany, and, most recently, Russia, among others). Bespoke superyacht building is however a competitive sector, with a lengthy and expensive bid process before contracts are signed, and significant negotiation over price, specification, and delivery. Once the build is under way, margins are constantly squeezed by third-party contractors and client changes. It is generally accepted that new-build work is less profitable but that it is essential to demonstrate the quality of work achieved by an individual yard. There have, however, been a number of well-documented instances of yards sustaining significant losses (often in the £ millions) on complex new-build contracts, and a rumored loss of more than £20 million (US\$32 million) sustained by a lead contractor on one fixed-price contract to build a particularly large and radical yacht.

It is apparent from the data that the challenges of building complex and sophisticated products to exacting standards cause tensions within the design-and-build process. One project manager articulated this, saying: “This is a very hard business, tough, very hard. It has massive expectations from very wealthy and intelligent clients, driving a very low-tech, very poor industry. It is almost at opposite ends of the spectrum.” There is certainly evidence in the data that although both the yards that participated in the study have some outstandingly skilled employees who are fiercely loyal and committed to their work, finding and training new

employees is a challenge. Additionally, the management of subcontractors is a serious challenge, for reasons already stated.

However, it is evident that the superyacht yards where this research data was collected are dedicated to meeting complex client demands as well as possible. This in itself causes difficulties, as, in the words of one project manager, “When an owner steps on board, they expect it to work like their house, so when they press flush on the toilet they expect it to flush, when they switch a light on they expect it to work, and when they turn on a tap they expect clean water to come out of it. And they have no idea on God’s great Earth how any of that got there.” He continued with a rhetorical but entirely reasonable client conversation: “Can I have some ice in my drink? *Sorry, there is no ice.* Why is there no ice? *Because there is no water; because the water maker isn’t on; because the generator isn’t on; because you didn’t want the noise whilst you were watching the television.* I don’t care. I’ve just paid millions of pounds for this, so I want some ice in my drink!” Delivering to those challenges requires complex and expensive systems to work in concert, and the interfaces between such systems are often unique. This requires that the project management of the various personal and technical interfaces be managed in a “seamless” way, adding to the pressures on project managers who may not have formalized training in this area. In addition, larger yachts may have over a million pounds’ worth of state-of-the-art audiovisual equipment with miles of complex cabling, all integrated with navigational electronics. As one project manager stated, “If the owner comes on board and doesn’t notice anything, you have done a good job.”

There are specialist organizations that specify, supply, and install such equipment, but the significant cabling requirements need to be specified well in advance, in order that it can all be hidden during the build, and the client

may change its mind if new and more desirable equipment is introduced before the delivery date. Improvisation tends to be utilized to assist with these changes, in that additional activity and unplanned work needs to be incorporated into the build without extending delivery dates, resulting in the need for project managers (who may or may not have the technical capability) to deal creatively with complexity and ambiguity in some areas of the build as demanding owners incorporate new and technologically advanced systems.

The temporal rhythm of improvisational work is different to that for refit projects. Within new-build work, detailed planning takes place as a part of the bid process, and usually major elements such as hull length and superstructure design are fixed at an early stage. Improvisational activity therefore tends to appear during the fitting-out stage (i.e., in the third and fourth quarters of the build timetable, when the client can start to see what he or she is buying, and can consider the inclusion of new, improved, or more modern additions and modifications).

Refit Work

At the level that superyacht yards are operating, almost all the yachts worked on are “certificated” at some level, usually by an accrediting and certifying body like Lloyds of London or the Maritime and Coastguard Agency (MCA). This level of certification requires a major inspection and remedial maintenance/refit every 5 years, and given the number of major new yachts launched every year (somewhere over 200), refit capacity is tight. Yards are therefore turning over more resources to the steady stream of available refit work, often at the expense of new builds. Indeed, for some yards, refit work may be up to 70 to 80% of their work by value, and many yards worldwide are not equipped to undertake “new-build” work.

For many yards, the rationale for this is that refit work is less competitive,

more plentiful, and easier to cost. The relative risk of fixed-price, fixed-delivery new-build contracts is reduced, and more work is priced on a time and materials basis. It is, however, evident from the data and from wider industry knowledge that a reputation for quality is built on the back of the delivery of new yachts, and certainly the CEO of one of the yards within this study considers that its refit order book would not look as healthy without the prestigious floating advertisements of quality that have come from its (often very innovative) new-build work.

Evidence from the data does, however, suggest that refit work is more “uncertain” than new build, with one project manager stating: “The boats usually turn up without notice or weeks earlier than they said. There is no job list, or there are five items in a contract . . . and you plan from there.” There is also a tendency for requirements to escalate once work commences, as the yacht is “opened up” to investigate problems. For example, during refit, almost all yachts are repainted, and once preparation starts, areas of hull corrosion need to be remedied on an ongoing basis. At this early stage, one manager suggested that work was “90% reactive, 10% off the plan.”

This indicates that the temporal rhythm of refit work is more improvisational at the early stage of a project, with one manager suggesting, “By the first quarter you would have taken out a lot of the anomalies.” The inference is that by the end of the first quarter of the time period, a more accurate estimate of the required activity (and the resourcing to meet the requirements) is able to be made, and the remainder of the project follows a more “planned” model.

Having said that, one experienced project manager who was used to working on the major rebuild of historic (i.e., older, predominantly wooden) yachts articulated his views on improvisational working within his role in the following terms:

How often do I improvise? Daily, hourly. Nothing goes to plan. Nothing comes in through the stores

that is in exactly the right quantities: the right quality, the right color, the right anything that you ordered it. No drawing comes from a designer exactly how you imagined it. No workman works as quickly as you imagine he should or to the quality we think he can. No subcontractor does what you thought they were going to do on the day that you thought they were going to do it, with the materials you thought they were going to do it with. So, the mystery, magic plan has all this “Shangri La” of hope attached [laughs], and you have to fudge it together and improvise and fill in the blanks when it all doesn't go to . . . as you imagined. So, yes, improvisation is daily, hourly, constantly.

Interestingly, however, the same project manager also confirmed later in the same interview, “I'm maybe a bit more formal in some of my documentation” and “maybe I am a bit less ‘seat of the pants’ than anyone else here.” This indicates a significant tension between the need to plan to have a baseline to measure performance and achievement against, and the need to get things done to achieve against demanding physical and temporal requirements. This is a classic dilemma within improvisational work and requires a significant element of trust as well as some element of “framework” within which qualified and trusted workers can improvise. It is, however, evident that both yards have a committed and skilled workforce with a vested interest in the production of beautifully crafted and bespoke outputs. One project manager confirmed that “[we] have a relatively self-motivated workforce” and that usually those workers with many years of experience could be trusted to resolve most difficulties without supervision or intervention.

Discussion

It is apparent from the various data collected and considered within this study that there are a number of improvisational and temporal patterns

Project Management and High-Value Superyacht Projects

that apply to work within the U.K. superyacht sector. The dismantling of rigidities within the traditional “plan, then execute” project management model is becoming a common theme within project management research, and there is also a growing awareness of the temporal rhythms that prevail within this type of work. A summary of the issues that have emerged from this study is encapsulated in Table 1, and the issues are expanded next. The data that underpins this figure is documented in

the Findings section. Issues that appear to be common to both areas of superyacht activity will be dealt with first, and attention will then be focused on issues relating to new builds and refit work.

A surprising finding is the limited amount of formalized training for project managers in a sector where the output is so complex and bespoke. This finding can be to some extent moderated by the level of apparent standardization in hull and superstructure construction,

and the need for equipment that can be treated in a fairly standardized fashion (i.e., engines, air conditioning plant, water makers, etc.). It is still evident that, in this sector, experience takes precedence over formalized knowledge of project management techniques. This experiential imperative also extends to the wider workforce, indicating the dependence on traditional craft skills in what purports to be a mature and increasingly high-tech sector.

Project Management of “Superyacht” Activity			
	Commonalities	New-Build Projects	Refit Projects
Improvisational Issues:	Project manager training is significantly lacking, and project managers tend to emerge by virtue of experience and tacitly gained experience of the key issues within the sector	Tensions between informed clients with demanding requirements and relatively unsophisticated “craft-based” shipyards endeavoring to deliver bespoke innovative products Often resolved by compromise and experimentation/improvisation	Uncertainty in the “specification” of works required, and management of escalating requirements Resolved through allowances of “slack” within project planning, and replanning after agreement of requirements
	Managing change requirements instigated by client desire for newer, different, or improved specifications Often achieved with improvisational practices, which disrupt prior project planning and lead to uncertainty in delivery	Integration of complex systems by specialist third-party contractors—interfacing of complex systems from different suppliers Achieved with great difficulty through negotiation and improvisation to deal with poor specification issues	Difficulties in predicting human and physical resources required for an ambiguous program of complex work Resolved by “trading” resources between projects on a formal and informal basis
	Management of subcontractors is problematic, leading to increased improvisational activity in order to solve many scheduling and compatibility problems		
Temporal Issues:	Problematic or late delivery of key items or components, disrupting or stalling planned activity Usually resolved with improvisational activity to vary previously planned and scheduled work	Temporal uncertainty in the third and fourth quarters of the project, generated by client desires to include new and fashionable equipment and features Usually resolved by improvisational activity and—as a last resort—the extension of the project or late delivery	Temporal uncertainty in the first quarter of a project, because of uncertainty on scope Usually resolved by creating slack in project plans in quarters three and four to allow for additional activity

Table 1: Summary table of outcomes.

It is also evident from the data that managing change requirements is challenging in all projects, but within the high value and personalized product arena researched here, expectations are high. It is therefore incumbent upon the project manager to deliver heightened and amended requirements as a matter of course, without recourse to replanning and temporal adjustments. This situation is a classic trigger point for improvisational activity (Leybourne, 2002, 2006a, 2006b), and it is evident that project managers are drawing on a personal library of previously tested and amendable scenarios to resolve difficulties generated by unplanned change requirements.

Network theory comes into play in the management of subcontractors, some of whom are regular participants in networks where the yards are the central network coordinators, and some of whom are new to the network or to the sector. These network participants fall into two distinct categories: expert (i.e., navigational electronics and audiovisual specialists) and generalist (i.e., fabricators). Such networks exist and require managing at both the social and the operational levels. Both horizontal and vertical linkages and relationships require nurturing and managing (Miles & Snow, 1992), and the data from this study suggests that there are many challenges for the project manager in maintaining and managing such networks, only some of which are being resolved satisfactorily.

This improvisational activity spills over into the issues surrounding late delivery of components and the significant disruption that this can cause in a temporally demanding build schedule. Often, bricolage comes into play (Lehner, 2000) to resolve issues quickly, particularly as new-build projects are reaching relative completion.

Moving now to issues impinging on new-build projects, there are particular difficulties that surround changing requirements, and the skills to respond to such requirements, in a sector where

traditional skills in bespoke craftsmanship are so central to delivery. Compromise and experimentation are key here, and issues surrounding such difficulties have already been discussed. The integration of complex interfacing systems has also been highlighted previously, within the area discussing network management.

Refit work has its own set of issues, notably those relating to the uncertainty surrounding the scope of work to be carried out, and the difficulties in scheduling amidst ambiguous contracts and escalating scope. Project managers have, however, become adept at creating temporal space within the latter part of the project to allow for such escalations, creating a temporal rhythm that is remarkably consistent across a number of analyzed refit projects. This clearly resonates with the findings of Bunzel (2002, p. 180), albeit in a different business sector, which recognize that “rhythmic consciousness as creative, intentional activity is perfectly capable of integrating non-periodic events.” Bunzel (p. 181) goes on to suggest that as “rhythmic performance is only partially ordered, it allows for ‘spontaneity’ and ‘creativity’ (original emphasis).”

Rather naturally, such uncertainty and ambiguity relating to scope of required activity can result in difficulties in predicting the human (and indeed other) resources required to meet eventual project requirements. This is often resolved by formal or informal “trading” of resources between project managers and project teams, although there are often resourcing “bottlenecks” caused by demand for specific skill sets that are in short supply.

Conclusions

This article has considered a number of issues relating to the project management of high-value bespoke super-yachts. It is evident from the data that the changing scope of such products across the range of work carried out by the specialist shipyards results in a need to negate planning and shift to a

more improvisational style of work scheduling and execution on a regular basis. Furthermore, the pattern of such shifts from planned to relatively unplanned work is shown to follow a pattern, or “rhythmic performance” (Bunzel, 2002). In essence, this demonstrates a “commodification” of time, in that within the project domain, “the quantitative, divisible time of the clock is translatable into money” (Adam, Whipp, & Sabelis, 2002, p. 16). This is seen as particularly apposite within the project domain, with its relatively inflexible delivery deadlines. It follows that, as a result of its apparent commodification, time has become a scarce resource in the context investigated in this research, and its control is therefore a central task for project managers. Improvisational working assists with this (Crossan, Cunha, Vera, & Cunha, 2005), notwithstanding the apparent and documented (Leybourne, 2002, 2007) contradictions between control and improvisation. Ciborra (1999, p. 77) reinforced this, suggesting, “Improvisation, seen as an extemporaneous process, opens up alternative approaches to cope with time in business.” There are also links with the work of Rämö (2002) here, particularly in the “particular focus on *chronos* (clock time) and *kairos* (timing) in project organisations” (2002, p. 571).

It is also evident that project managers within this highly specialized sector (notwithstanding an apparent lack of formalized training) are adept at reconciling diverse and potentially damaging tensions between control and improvisation within their domains of responsibility. There is evidence of a reliance on experience, and the ability to draw on a pre-experiential library of previously successful improvisational interventions, which can be adapted and adjusted to meet a specific requirement to resolve a project-based problem. Project managers are using such interventions increasingly, mainly to resolve areas of ambiguity and uncertainty within what are often

Project Management and High-Value Superyacht Projects

poorly defined elements of project scope.

Arguably, this is a shift away from the traditional project-based paradigm of “plan, then execute,” but in the increasingly complex domain investigated here, where acceptance of the complex adaptive system model (Stacey, 1996) is becoming more widespread in project-oriented organizations, it is not a surprising finding. It is also likely that as superyacht projects grow ever larger and more complex, this trend will continue. The question for the sector is: Can project managers within the sector grow their expertise as quickly as superyacht clients increase their demands for these unique and bespoke products? ■

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