

# Business Perspectives on Proposed Changes to OUSD(AT&L)

Prepared for the House Committee on Armed Services

**OVERVIEW.** In December 2016, the House Committee on Armed Services (herein “the Committee”) solicited insight from Business Executives for National Security (BENS) on private sector best practices for fostering innovation within an organization while simultaneously ensuring efficiency in research and development (R&D) endeavors and operations and sustainment (O&S) activities. BENS subsequently conducted semi-structured interviews with approximately thirty Members from varied backgrounds. These interviews focused on, among other issues, how private industry divides responsibilities between corporate and division levels; maintains accountability; manages the interface between R&D and O&S; and manages human talent. *All discussions were held under Chatham House Rule and the following is an anonymized aggregate representation of key issues that emerged.*

**SCENE SETTER.** This memo is not intended to be detailed or prescriptive. Rather, it serves to highlight issues, as identified by industry leaders, that the Committee may consider as it examines ways to enable a more agile acquisition process through a reorganization of the Office of the Undersecretary of Defense for Acquisition, Technology, and Logistics (OUSD(AT&L)). Likewise, owing to their different cultures, incentive structures, and relation to the marketplace, establishing direct analogues between the public and private sectors can prove challenging. While informative, it is prudent to consider the different perspectives of commercial actors before attempting to apply recommendations directly as articulated.

Nevertheless, it is clear that private industry approaches a significant corporate reorganization (e.g. a merger, acquisition, or corporate spin-off) in a deliberate process that begins with developing a business case for change that is linked to an economic driver, or rationale, for change. In developing this business case, companies frequently map their current systems in order to gain a clear understanding of the “as is” process and identify specific inefficiencies or opportunities for improvement. A business case also provides a clear picture of the desired end state and common definition of what success looks like. Beginning with the end in mind, and developing that vision collaboratively, is widely acknowledged as a critical first step before executing any major corporate reorganization.

Once the business case is established, companies develop a road map for implementation. Among other things, this roadmap: identifies the minimal number of assets that need to be divested, rationalized, or consolidated in order to achieve the desired reorganization; establishes objectives and timelines for meeting them; determines levels of risk tolerance; and develops mechanisms for constant feedback and process improvement. Once established, the business case and road map must be communicated in a clear, concise, and consistent manner to all employees so that they understand and embrace their role in achieving the organization’s desired end-state.

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**ISSUES TO CONSIDER.** The following themes emerged during conversations as keys to success in the private sector that could be informative for the OUSD(AT&L) reorganization.

BENS stands ready to provide further assistance to the Committee to outline in greater detail the process by which many companies create business cases and associated roadmaps.

## LEADERSHIP

A successful corporate reorganization requires attentive and deliberate leaders who are responsible for developing a business case for change and communicating it down through their organization. For the purposes of the Committee's request, there are two leadership issues worthy of consideration:

- (1) Distinct levels of leadership.** In the corporate world, there are two distinct levels of leadership: the C-suite executive level and the Board of Directors level. The C-suite is responsible both for establishing an organization's mission, vision, and business case for change, as well as guiding its implementation throughout the organization. The Board of Directors advises the C-suite and provides oversight of corporate functions. This requires a collaborative relationship wherein each level of leadership shares a mutual definition of success, agrees on the type of data that will be used to measure progress toward that definition, and understands the acceptable levels of risk contained therein. Thus, for example, it may be prudent to not only encourage a risk-acceptant culture within the proposed Office of the Undersecretary of Defense for Research & Engineering, but to also foster a more risk-acceptant culture within the Committee.
- (2) Unintended managerial responsibilities.** In the private sector, the C-suite executives are responsible for resolving disputes between different business units when they arise. In some organizations, this referee may be the chief operating officer, chief financial officer, or even the chief executive officer. In dividing OUSD(AT&L) into two separate undersecretaries, the Committee may consider which office will be responsible for resolving any disputes that may arise. As currently planned, this responsibility may fall to the Office of the Deputy Secretary, which may be the appropriate place but may also contribute to an unintended managerial responsibilities for that office.

## TALENT MANAGEMENT

A successful corporate reorganization is dependent on making sure the correct people are in place to execute both the reorganization itself, as well as to maintain the new business units. For the purposes of the Committee's request, there are two talent management issues worth considering:

- (1) Processes and people.** Many of the most innovative firms rely on high-performing teams who understand and embrace their role in the organization, and are thus empowered to take risks and make the decisions necessary to achieve the overall mission. Creating these teams requires developing clear organizational processes that are implemented and continuously improved upon based on employee feedback. Organizations must also determine at what level key performance indicators (KPI) are established. If the KPI are established at too high a corporate level, it may be challenging for employees to understand how they can meaningfully contribute to the company's goal. Conversely, if the KPI are established at too low a level (e.g. the individual or team level) they can become detached from the company's overall goal, which can result in employees meeting their KPI but the company failing to achieve its overall goal. As important as it is to establish and continuously improve these processes, it is imperative this process is not emphasized at the expense of the company's human capital. Companies who successfully establish and enable an innovative and efficient organization do not view people as interchangeable parts in their process, but rather they focus on recruiting and cultivating talented employees.

Part of this leadership development includes tolerating bad decisions and learning from mistakes. Many companies encourage the quick, upward flow of bad news in order to remediate a situation and understand the root causes.

(2) **Reverse hierarchies.** In rapidly innovating industries, companies develop responsive feedback processes for lower-level or younger employees to inform larger corporate decisions. One BENS Member called this a “reverse hierarchy.” These feedback loops can serve multiple purposes. First, the younger or lower-level employees may have better insight into how technology could be incorporated in a company’s front-line functions. Second, in the case of the Department of Defense, large acquisition or development programs may take years and are often initiated to address a future capability. Therefore, it may be prudent to develop mechanisms that allow younger employees to inform the decision making process outside of the traditional requirements generation process, because they may be the ones responsible for fielding or maintaining the program years later.

## ACCOUNTABILITY AND DECISION MAKING

While it is counterintuitive, large hierarchical organizations are often mired in bureaucracy and habit to the point that accountability and decision-making authority become opaque matters. Through the process of reorganization and beyond, it is important to identify not just the key decision points, but who (or what office) is specifically responsible for making those decisions.

It is important not to emphasize the process at the expense of the company’s human capital. Many companies do not view people as interchangeable parts in their process, but rather they focus on recruiting and cultivating talented employees.

- (1) **Empowering lower levels.** The majority of BENS Members indicated that they emphasize empowering employees at the lower levels of their organization. The objective is to enable those individuals who are the closest to the product, mission, or customer to be able to make quick and responsible decisions as the conditions warrant them. In order to maintain oversight, some BENS Members indicated that they establish risk or resource thresholds under which employees are empowered to make decisions. As lower levels are empowered, it is also necessary to emphasize the development of capable middle managers. Part of this leadership development includes tolerating bad decisions and learning from mistakes. Many companies encourage, if not demand, the quick, upward flow of bad news in order to remediate a situation and understand the root causes. Likewise, it’s equally important to understand the root causes of success, so that best practices may be recorded and scaled.
- (2) **Attentive leadership.** As lower levels are empowered, it is important to maintain accountability throughout an organization. This requires attentive leadership. Many BENS Members indicated that at the executive level, it is important for leadership to hold their staff accountable. This can manifest as holding regular meetings to ask direct questions and taking deep dives into specific topics. As the Members indicated, if your team knows you are going to ask multiple in depth questions, it forces them to be prepared. However, this does not have to be a punitive exercise. People can be held accountable for the things they did well, and in those cases it is important to identify root causes of success so that they can be scaled and implemented elsewhere.

## MARKET RESEARCH AND INSOURCING/OUTSOURCING DECISIONS

Time is a valuable commodity in the private sector and speed to the market represents significant competitive advantage. With this motivation, the private sector invests heavily in agile, iterative design processes. Similarly, market research is viewed as a critical, enduring activity and not a just-in-time effort.

- (1) Going to market & minimally acceptable products.** In the private sector, products are developed in response to current customer demands. For example, a product manager may conduct market/customer research (e.g. attending trade shows, conducting focus groups, online research) to understand what the customers *want* now and then work with the engineers to understand what can be built *now*. Ultimately, private companies go to market with a minimally acceptable product that addresses the primary needs of the consumer at that point in time. Thereafter, companies will solicit feedback from consumers and iterate new versions of the product. In the assessment of several BENS Members, some government acquisition projects can suffer from scope creep because the customers are left out of the decision-making process, or are several steps removed. By developing market requirements (what does the customer need), prioritizing those requirements, and going to market with a product that addresses the highest priorities, companies can reduce the cost, time, and risk associated with a longer-term research and development effort.
- (2) Purchased research.** Companies must decide what research to outsource and what research to insource. Often, the scale of the business can influence that decision (e.g. a modest airline with a small fleet of 777s would probably not insource the maintenance), as can determining whether the product or service is core to the company's mission. In those cases where the scale does not warrant insourcing the R&D, companies can purchase research from commercially available sources, which can reduce the risk of developing it internally. In essence, many companies do not evaluate whether they are able to build a product or system, rather they consider the time to market and whether that product or system can be acquired or adapted at lower cost, less risk, and shorter time to market.

Many companies use commercial off the shelf technologies and create customized add-ons for specific clients or tasks. This is frequently cheaper than developing a one-off solution (e.g. software platform) and can be easily upgraded. As several BENS Members observed, however, in the defense space larger prime contractors—who are essentially system integrators—do not have incentives to use off the shelf solutions. In all cases, once a decision is made whether to insource or outsource R&D, that decision is periodically reviewed and reassessed in light of changing information.

## MANAGING INTERFACES

In the defense acquisition space, there is such a thing as the “valley of death.” This is the moment in a product lifecycle when it should move from the R&D process, to become a program of record. Unfortunately, this is when programs are most vulnerable given a frequent inability to obtain funds for proper acquisition. Care should be taken that an additional “valley of death” is not created with the pending AT&L reorganization.

Ultimately, private companies go to market with a minimally acceptable product that addresses the primary needs of the consumer at that point in time.

- (1) Embedding R&D within a transparent process.** In private industry, decisions regarding R&D investments are not made in a vacuum. It would be short-sighted to have engineers make decisions without input from the finance department, supply chain managers, manufacturers, etc. Therefore, O&S, as well as representatives from other business units, are brought into the process early to provide their perspective. These cross-functional teams are formed at the corporate level and evaluate all programs early in the development process. Companies achieve this by developing

strong, transparent processes to manage the interface between R&D and O&S. These processes do not stifle innovative thinking, but do account for the myriad stakeholders who are involved in R&D decisions.

Managing the interface between R&D and O&S also requires defining the type of research that is being undertaken. Applied R&D is very different from long-term or “blue skies” R&D. Companies must decide when to make incremental improvements or take transformational leaps. They do this by collecting information on various factors, including: the current market conditions; current customer demands vs. projected customer demands; the state of the competition; etc. Some companies have a head of strategy, who is responsible for long-term R&D, and a head of business development, who is focused on shorter-term practical ventures. In all cases, there must be a clearly defined relationship between R&D, O&S (and even S&T), and how they nest within a corporate strategy.

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(2) **Product Champions.** Successfully transferring a product from research to operations is a critical juncture that can determine the long-term viability of the product. Accordingly, some companies will detail one employee or a small team of employees to transition technology from the research phase to the maintenance phase. If this doesn't happen, companies risk transferring technology without the institutional knowledge that went into developing it. Companies often find “champions” for projects who are responsible for shepherding the product through development and helping to transfer it to operations and production. Often, if a product doesn't have a champion it won't be approved.

## DATA, METRICS, AND EVALUATION

Data without purpose or relevance is immaterial. It is important in any undertaking to determine what information is valuable in the process of making identified decisions, and subsequently take steps to collect that information in an efficient manner. Often organizations record different information than what the culture values, and this has the potential to be detrimental in the long run.

- (1) **Agreement on data.** Organizational agreement on data is rooted in a company-wide understanding of how data feeds into the metrics used to evaluate progress toward the overall business mission. A company generally charts major initiatives, organizes them into goals, objectives, and milestones, and then picks a set of metrics by which to measure the company's effectiveness in meeting the initiative over time. The process of developing this is often overseen by a steering committee and is regularly reviewed by all levels of leadership. Reporting is key, and is facilitated from bottom to top. BENS Members cited financial data, time, KPI, market demand, manufacturing or asset base assumptions, investment performance, and employee surveys as key data points. Customer feedback is also incorporated into future planning. Predictive data was highlighted as a method to determine lifecycle costs. For example, the airline industry predicts maintenance through consistent data collection, which ultimately lowers the cost of flying.
- (2) **Data governance.** In the private sector there are clear data governance processes which inform how data is collected and used. Importantly, these processes are not static, but are constantly reevaluated and continuously improved to ensure that the data being collected is valid, is collected and recorded in a meaningful manner, and feeds into clearly defined objectives. Based on BENS Member feedback, in general there are five aspects of data governance:
- Clear uses for data are established and linked to metrics, which are driven by business goals and used to establish benchmarks.

Predictive data was highlighted as a method to determine lifecycle costs.

- These metrics are transparent and agreed to throughout the organization. The reason that each data point is collected is clearly articulated through written protocol.
- IT departments are frequently responsible for the storage, protection, security, and availability of data.
- Data is kept consistent, frequently through the use of data governance committees, and is reviewed regularly. This constant evaluation ensure that the data being collected remains valid and linked to meaningful objectives.
- Reports are often validated by field experts and market researchers to avoid misinterpretation.

# Recommendations for Action

As prepared by Business Executives for National Security

## RECOMMENDATION 1

Establish and publish both a clear business case, as well as achievable implementation plan.

## RECOMMENDATION 2

Encourage an honest, progressive definition of risk be promulgated and embraced by stakeholders at all echelons.

## RECOMMENDATION 3

Reconsider the level at which—and process whereby—disputes between the new Undersecretary-level offices will be resolved

## RECOMMENDATION 4

In collaboration with executive, senior, and mid-level leadership, establish and communicate Key Performance Indicators for each reimagined organization.

## RECOMMENDATION 5

Develop feedback mechanisms for real-time feedback during both the reorganization process, but also growing period of each new organization.

## RECOMMENDATION 6

Create the mechanisms to encourage the Department to articulate the risk or resource thresholds under which employees are empowered to make decisions.

## RECOMMENDATION 7

Encourage entrepreneurial behaviors and the application of agile, iterative processes to develop capability with open architecture.

## RECOMMENDATION 8

Require generic evaluation criteria for make/buy decisions.

## RECOMMENDATION 9

In the R&D cycle, establish criteria for terminating a make/buy decision based upon an ever evolving market.

## RECOMMENDATION 10

Establish cross-functional teams at the corporate level to evaluate all programs early in the process, and make to decisions regarding the progress of a program from one phase line to the next.

## RECOMMENDATION 11

Consider the viability of assigning program “champions” to remain with a program throughout its life-cycle from R&D through deployment.

## RECOMMENDATION 12

Consider the development of a data campaign plan and governance process. Think through and communicate what data is to be collected, when, by whom and by what mechanism, as well as for what purpose. This process should be reevaluated periodically.