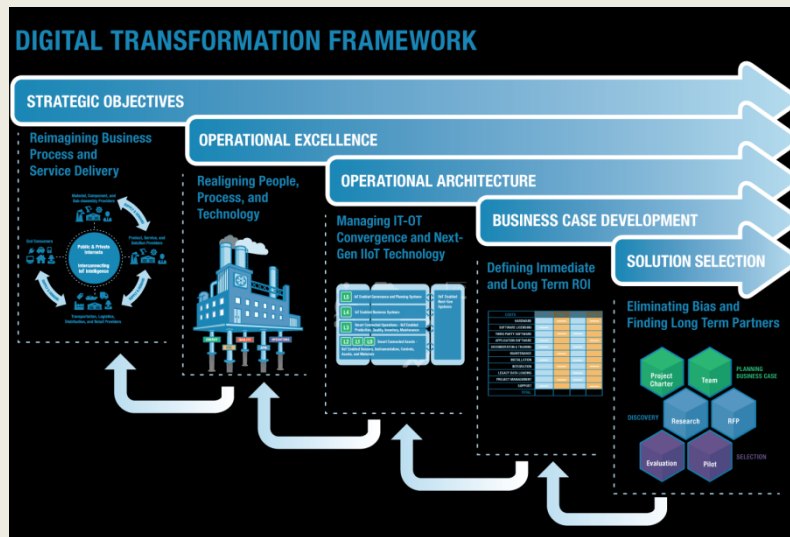


## Connect Initiatives and Roles for Digital Transformation

In making Digital Transformation (DX) a reality, what many companies are missing is a systematic approach to effecting change. The Digital Transformation Framework is designed to help industrial companies understand how to connect all of these simultaneous and interconnected initiatives.



- Strategic Objectives:** At the highest level industrial companies today have to be thinking about how many of these new technologies, like the IIoT, can disrupt and transform products, value chain business processes, and connected service delivery. At the strategic level, companies should be doing 5, 10, and even 20-year planning and often these transformative visions are:

  - Driven by the CEO and COO
  - Built around the competitive differentiators of the firm
  - Changing nature the very nature of service delivery by building upon existing models like Industrie4.0, Smart Manufacturing, or Smart Connected Assets
- Operational Excellence:** People, processes, and technology are the underpinnings of Operational Excellence initiatives, and these initiatives are typically owned by the senior-most line of business function leaders in the organization. Leading companies today have developed maturity models to help set goals and growth plans for people, process, and technology capabilities along with metrics programs to evaluate performance across all areas of operations. Most companies have had Operational Excellence initiatives in some form or fashion for 10 years or more. Often, these initiatives also incorporate the multiple management systems and continuous improvement capabilities of the firm like Lean or Six Sigma. Not only do manufacturing companies need to continue to evolve Operational Excellence initiatives to be the continuous improvement engine of the company, but also the innovation engine of the company.

Often, this means moving to more of Lean Start Up mentality of fail often and fail fast, with pilot projects that have the potential of delivering much more than the typical 1%-2% benefits delivered by most continuous improvement initiatives.

- **Operational Architecture:** Traditionally Enterprise Architecture has been owned by the IT organization and has typically focused on establishing robust processes for evolving the enterprise application landscape and supporting IT stack. Separately automation, corporate engineering, and or advanced manufacturing (often now referred to as OT) owned the technology architecture for plant-level technology. With the emergence of IIoT, LNS Research recommends industrial companies adopt an Operational Architecture approach that applies the formalized rigor and process of Enterprise Architecture to the entire IT-OT stack. For this to be accomplished effectively, industrial companies need to create supporting and collaborative groups that incorporate both IT and OT and as the Chief Digital Officer emerges, the success of this new collaboration as a key part of their charter.
- **Business Case Development:** Often industrial companies begin business case development and solution selection without also thinking about the connection to broader Strategic Objectives, Operational Excellence, and Operational Architecture. Typically, these business case development initiatives are successful when driven by deep subject matter experts that understand both the process and technology. Identifying these experts can be a challenge but often they are located in advanced manufacturing, hybrid IT/OT roles, are a leader within specific business functions, or are a technical fellow supporting the organization. Although these other areas of Digital Transformation don't need to be complete before a business case is started, they are interconnected. As such, it is important industrial companies don't view technology investments as a one-off business case but rather as a business case journey that aligns with system architecture goals, depends on increasing Operational Excellence maturity, and supports long-term Strategic Objectives.
- **Solution Selection:** Often industrial companies view Digital Transformation upside down, starting with solution selection, which then drives all other portions of the framework, rather than vice versa. Again, with solution selection, it is important to put the activities within the context of the broader initiatives. Solution Selection is never successful in a vacuum, and when it is done in such a fashion, change management becomes an insurmountable challenge and adoption wains. For success, build an effective solution selection process that is quantitative to eliminate bias and a team that incorporates all relevant portions of the organization, including: IT, OT, and cross-functional business leaders.

By using a structured framework that connects initiatives and roles across all levels of the organization, industrial companies will be much better positioned to capture the full value of DX and IIoT.