

Governance and controls for large infrastructure projects

It is an exciting time for the infrastructure community. The Global Infrastructure Hub, a G20 initiative, calculates that the infrastructure spend across the 56 countries that it monitors will increase from USD 2.7 trillion today to USD 3.3 trillion in 10 years' time¹.

However, large projects often fail to achieve their stated objectives, especially their CAPEX budget. Project owners tend to use a disparate set of processes and tools to try to manage their projects in order to improve control and governance but often fall short as the solutions chosen lack integration or appropriate

consideration to be able to add value to the project's particular circumstances.

As projects start becoming data rich, their successful delivery becomes increasingly linked to the management of data, and traditional management methods and techniques are expected to change. Projects that are early adopters of integrated technology solutions will be able to make more robust decisions through the use of analytics and will be able to deliver significant benefits from automation, thereby leading to better project outcomes, as well as asset performance improvements.

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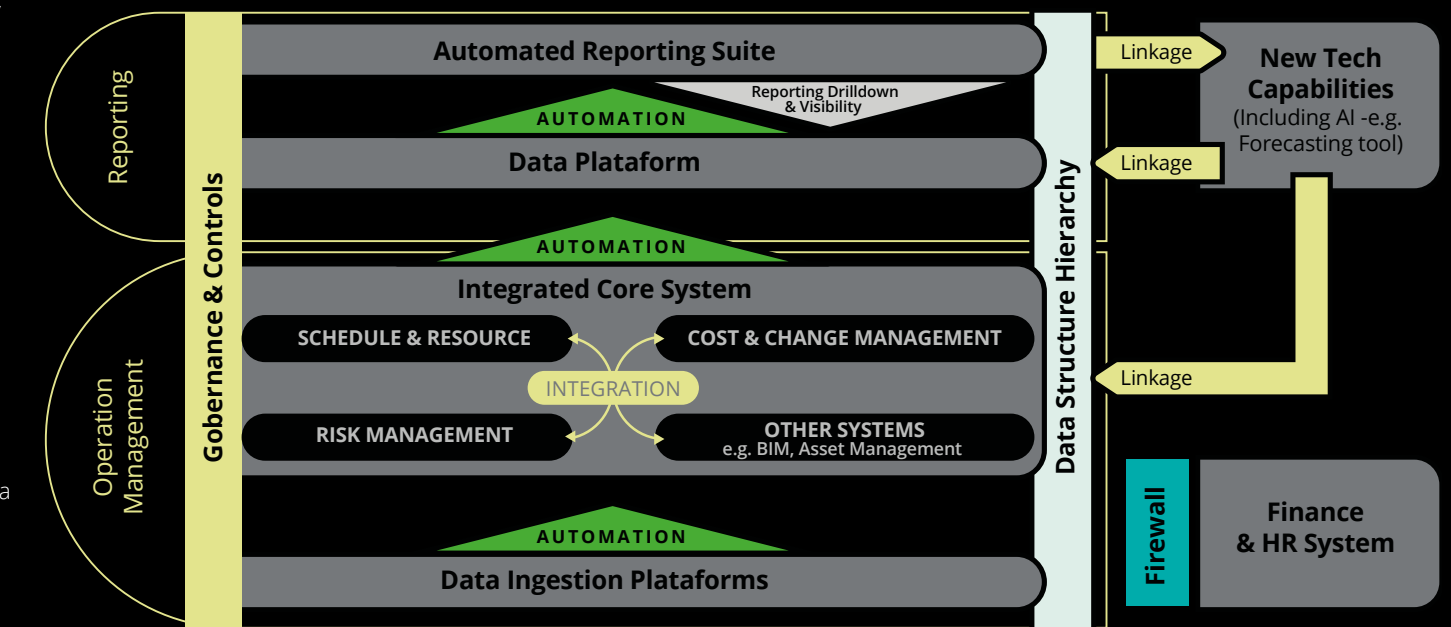
Benefits of integrated systems

Integrated solutions for controlling and capturing key project data across various data sets (for example, cost, schedule, risk and change) are essential for creating a "live" single source of the "truth". Such solutions are already being adopted on a number of large projects by a variety of organizations and, if implemented properly, can achieve a number of benefits, such as:

- Improved **governance** based on automated workflow systems;
- Reduced **data handling errors**;
- Overhead **efficiencies**;
- Improved **data analytics and insights** facilitating better decision-making;
- Enabling **artificial intelligence** and **machine learning**, by making use of structured data and data analytics;
- **Sharing data and information** between parties, increasing transparency and allowing an enterprise delivery approach to be created; and
- Improved asset performance based on **increased data availability**.

Figure 1: An example of an integrated system for controlling a project

Integrated System & Reporting Landscape



Source: Deloitte

1. Global Infrastructure Outlook "Forecasting infrastructure investment needs and gaps", <https://outlook.gihub.org/>, accessed April 24, 2020

Requirements and challenges

In order for such technology solutions to be effectively enabled, a number of critical requirements need to be met:

- **Project Data structures:** It is necessary to develop robust data structures, data definitions and data assurance processes across the project and align the data to a detailed integrated breakdown structure (for example work, organization, asset). This will enable systems to interact with one another at the appropriate level and facilitate integrated reporting.
- **Increased IT capability:** There needs to be a shift towards increased use of system and data architects, who will integrate and manage systems as well manage the flow and storage of information in data warehouses and platforms.
- **Project or business maturity:** Appropriate consideration needs to be given to selecting the right tools to support the requirements of the project or business. A common mistake is to select an “off-the-shelf” product which lacks the maturity and flexibility to be successfully deployed to the task in hand.

- **Transition complexity:** Proper attention needs to be given to the integration, technical and human challenges posed by the transition to new systems and solutions. If this is not done in an appropriate manner, considering factors such as the technical solution, stakeholder engagement and training, it can create considerable disruption and significantly reduce the chances of a successful implementation.

Conclusion

To be considered truly successful, large projects must demonstrate that they have successfully delivered against their critical success criteria and key performance indicators. Increasing use of technology is fundamental to achieving successful outcomes and it is something that will create a competitive advantage for early adopters. The question for all stakeholders is: Will you be a leader or can you afford to be a follower?



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