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Department of Transportation, Office of the Secretary of Transportation and Office of the CIO, Federal Motor Carrier Systems Administration

## **Implementing Enterprise Architecture to achieve Strategic Goals**

### **Services Rendered:**

Business Process Reengineering  
Lean Six Sigma Services  
IT Systems Alignment  
Segment Enterprise Architecture Analysis

## **Challenges**

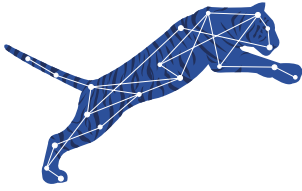
During the last decade, the role of enterprise architecture has expanded from simply being a technical blueprint for IT systems and infrastructure to include business-technology alignment. Currently enterprise architecture has become an inseparable aspect of an organization's overall strategy; agency executives, business managers, and architects use enterprise architecture within the context of overall organizational strategy.

Enterprise governance controls have evolved and improved over the last 50 years. The most significant impact was the Government Performance Results Act (GPRA), enacted in 1993, because it caused a major shift in the way agencies operate. This was the first time when accountability and performance were clearly delineated. Subsequently, the Clinger-Cohen Act, enacted in 1996, streamlined the IT investment and management process. This is when Enterprise Architecture started to gain serious traction within the IT community and upper management at the agencies.

Additionally, when introduced, the Presidential Management Agenda (PMA) was geared towards transforming federal agencies into results-oriented, citizen-centered, and market-based entities. It included five government-wide and nine agency-specific initiatives to improve the overall performance of the federal government, and provided significant productivity and performance gains across agencies through effective planning of IT investments. A significant finding during the electronic government (E-Gov) effort was the necessity for a federal enterprise architecture that can provide a comprehensive view into what an agency does, how it performs its business activities; and how the IT systems support those activities.

## **Solutions**

For the Department of Transportation (DOT), Office of the Secretary of Transportation (OST), T3 built a Segmented Architecture strategy to represent the Enterprise situation accurately and realistically for both past and future views. T3 work included the process data collection, documentation, and analysis. The selected strategy was implemented by means of programs, projects, budgets, processes and procedures. The way the strategy was to be implemented would have a significant impact on whether it was successful, and this is where Enterprise Architecture had a significant role to play. Since the people formulating the strategy were different from those implementing it, T3 emphasized that the way the strategy should be communicated was a key element of its success and it was clearly explained to the different layers of OST management and all other stakeholders.



OST needed to know where they were at the time and create a baseline Enterprise Architecture model of their current state; subsequently, T3 created a future target Enterprise Architecture model, and performed an impact and gap analysis between them. The future state Enterprise Architecture model contained not just one single future target model but multiple complementary or competing models of the many future scenarios.

The implementation of the strategy was monitored and adjustments made as required. For OST, evaluation and monitoring consisted of the following steps:

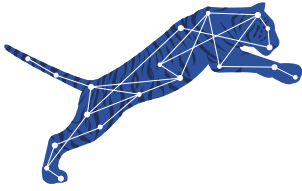
- Definition of KPIs, measurement and metrics;
- Definition of target values for these KPIs;
- Perform measurements;
- Compare measured results to the pre-defined standard;
- Make necessary changes.

Working with the DOT OCFO, T3 provided the business analysis artifacts and SIPOC process models supporting DOT's \$46-billion grants enterprise, including recommendations for the implementation strategy. The analyses involved examining almost 90 grant programs, 13 IT systems, and multiple data stores (databases, Excel spreadsheets, and paper forms) within the Department and four potential Line of Business partners and providing the first ever complete set of process schematics, including comparative analysis, to the OMB GMLOB.

For the Federal Motor Carriers Safety Administration (FMCSA), T3 helped define and document EA as essential to helping FMCSA improve decision-making, leading the implementation of EA within the strategic planning activities and daily operations for the agency. T3 used the EA artifacts to improve its business architecture, reuse of resources, manage its portfolios, align IT with business, reduce or minimize redundancies, and guide information systems design and development through its IT Modernization stage. T3 developed a change management system to manage the FMCSA application portfolio. This entailed modeling of the 'to be' process and developing a specific workflow without adding additional resources or any cost impact. T3 subsequently wrote the policy, procedure and agency regulations for the FMCSA Enterprise Change Control Board to manage the business and system architecture planning in order to set the business priorities for IT capital planning and the Capital Planning Board.

At FMCSA and at OST, T3 focused Enterprise Architecture on:

- Increasing the return on business and IT investments by closely aligning them with business needs;
- Identifying areas for consolidating and reducing costs;
- Improving executive decision making;
- Increasing the benefits from innovation;
- Delivering strategic change initiatives;
- Managing business transformation activities.



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## Results

The T3 Enterprise Architecture implementation at DOT was characterized across multiple dimensions. Enterprise Architecture was focused more on direction as provided by strategic planning (i.e., business transformation) and less on operational change (i.e. run the business). T3's Enterprise Architecture was focused on the business as a whole (i.e., the business model) and not just on the IT components. T3's Enterprise Architecture efforts were focused on a roadmap of changes to an organization's capabilities (long term, 5+ years in the future), and not on the short term. We focused Enterprise Architecture on the whole enterprise and not limited it to the scope of a delivery project. T3 Enterprise Architecture model focused on the needs and concerns of all agency stakeholders, and not just a selected few.