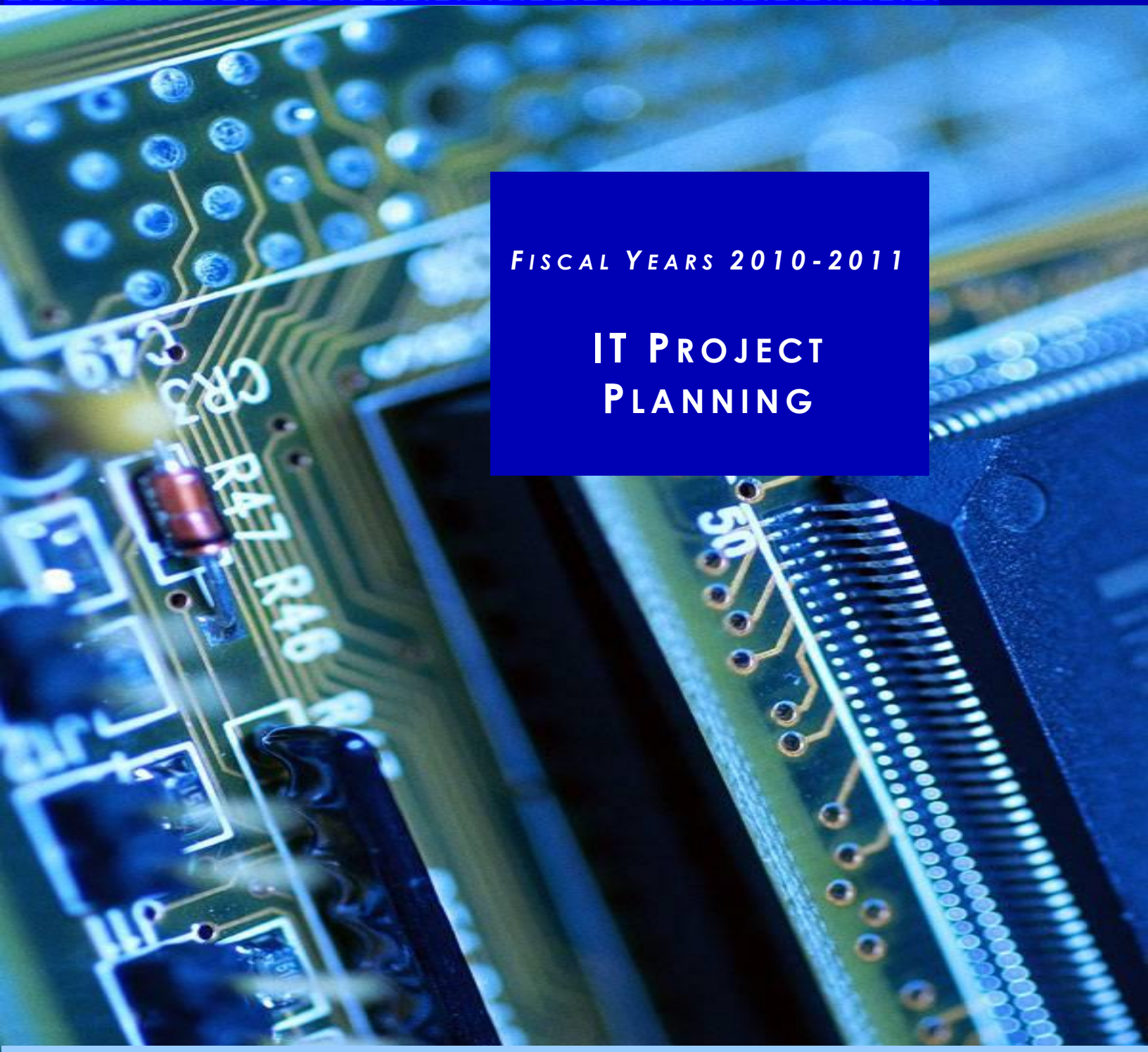
Statewide IT Investment Summary and Analysis



Fiscal Years 2010-2011

IT Project Planning

Department of Administrative Services • Office of Information Technology • Investment and Governance Division • Office of State IT Investment Management

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Organization of the Statewide IT Investment Summary and Analysis Report

The biennial Statewide IT Investment Summary and Analysis Report for the planning period for fiscal years 2010-2011 consists of five sub-reports. These are:

- **Executive Summary**
- **Enterprise IT Planning**
- **Strategic IT Planning**
- **Tactical IT Planning**
- **IT Project Planning**

A series of appendices details supporting data and analysis. Appendices are listed under "Contents" for a particular sub-report.

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Overview

This sub-report of the Statewide IT Investment Summary and Analysis Report presents the analysis of information from the IT project plan sections of agency IT plans. These sections contain planning information for each IT project requiring funding and expected to be active during the 2010-2011 fiscal years.

The trends, themes and other relevant commonalities among the 370 IT projects documented in the agency plans are presented in this sub-report, as follows:

- **IT Project Overview: Duration, Status, & Mandates.** Analysis of IT project duration data and reason for projects.
- **IT Project Commonalities.** Major types of projects and dominant project purpose themes.
- **Consolidated Observations.** The more critical issues from an IT project perspective of agency plans.

1 IT Project Overview: Duration, Status, & Mandates

This report section analyzes the anticipated duration of the IT project portfolio for all of the submitted agency plans. This analysis will indicate whether agencies are planning shorter or longer duration projects. If shorter durations of IT projects are planned, then planning practices will require adjustments to compensate. If longer durations of IT projects are planned, then monitoring and oversight of these projects becomes more critical.

1.1 Project Duration

Project duration is calculated by establishing the difference between the planned start date (or actual start date if the project has been started) and the planned end date of the project. The average project duration for the 370 IT projects planned for the FY10/11 biennium was 945.6 days, or 2.63 years. For FY08/09 the average project duration was 826.4 days, or 2.26 years.

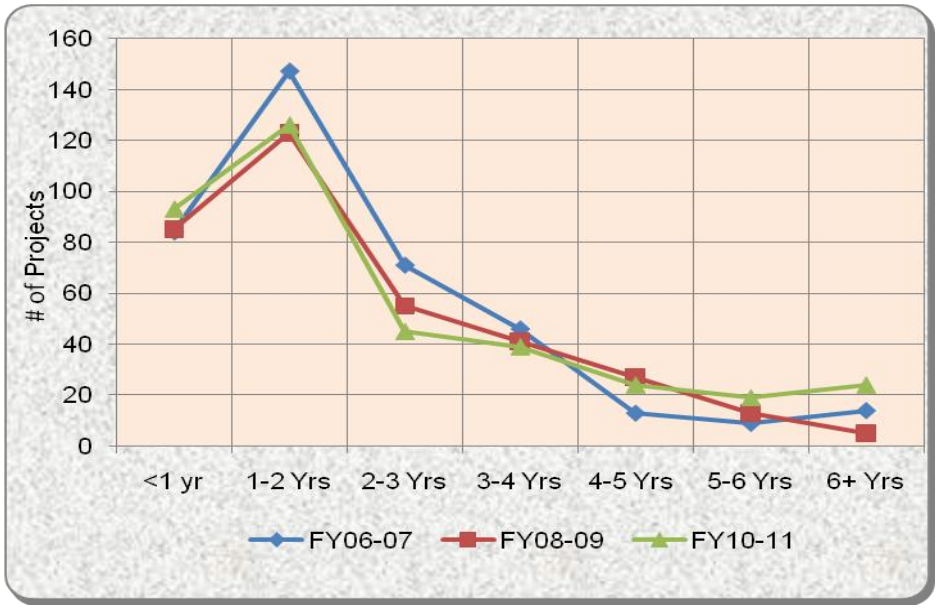

Figure P-1 Distribution of Project Duration

More than one-third, or 35.1%, of all projects end on the last day of the fiscal year. This is a decrease from FY08/09 where 38.8% of all projects ended on the last day of the fiscal year. Many of these projects will be continued as "new" projects in the next fiscal period, but because of budget/funding timelines, will show a shorter duration than will actually be expected to occur.

The total number of IT projects for FY10/11 increased by 3.4%, 358 IT projects in FY08/09 versus 370 projects in FY10/11. The percentage of IT projects in each duration period was compared for FY06/07, FY08/09, and FY10/11 and is shown in Figure P-2.

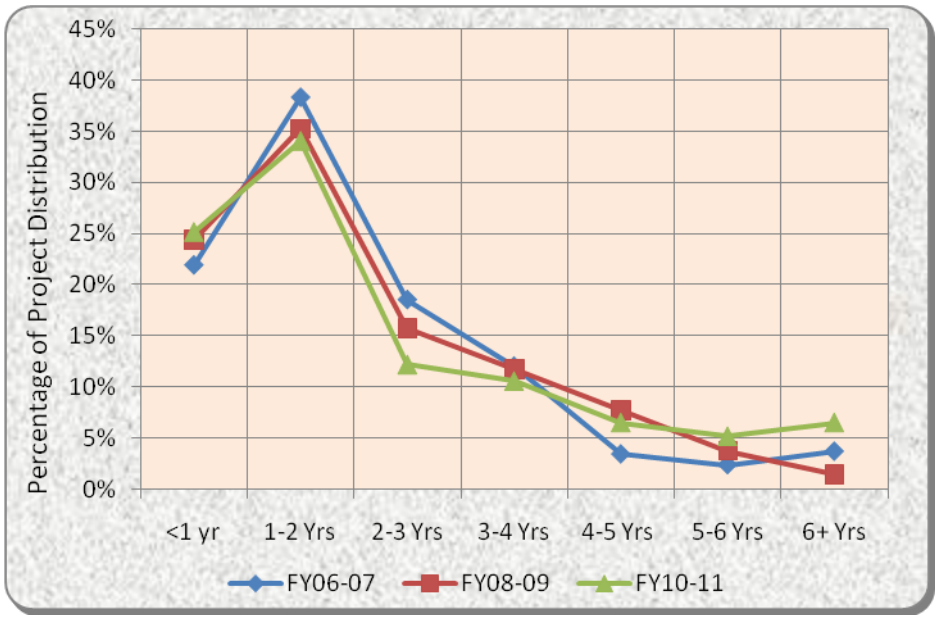

Figure P-2. Percent of Distribution of Project Duration

Figures P-1 and P-2 indicate the following:

- The proportion of FY10/11 projects in time periods 1-2 Yrs, 2-3 Yrs, and 3-4 Yrs decreased when compared to the previous two biennia. The proportion of FY10/11 projects in the 5-6 Yrs and 6+ Yrs time periods increased when compared to the previous two biennia. These two observations indicate a trend of projects lasting longer in FY10/11 than the previous two biennia.
- The percentage difference in the 5-6 Yrs time period was an increase of 46% in FY10/11 from FY08/09. This represents a project increase of six; 13 projects in FY08/09 to 19 projects in FY10/11. The percentage difference in the 6+ Yrs time period was an increase of 380%. In FY08/09 there were 5 projects in this time period, and in FY10/11 there were 24 projects.

Web services can be developed and fielded in a much shorter time span than "traditional" applications. At a time when agencies are engaged in moving legacy applications to a Web services environment, more projects are expected to last a shorter period of time. However, the increase in projects with a 5-6+ year duration indicates that projects with significant technology or business changes have not shown a decline parallel to the increased presence of government services on the Web.

1.2 Project Timeline Analysis

A timeline analysis shows when the portfolio of IT projects is anticipated to be active during the fiscal period. A project is considered active if it started or remained active during that time.

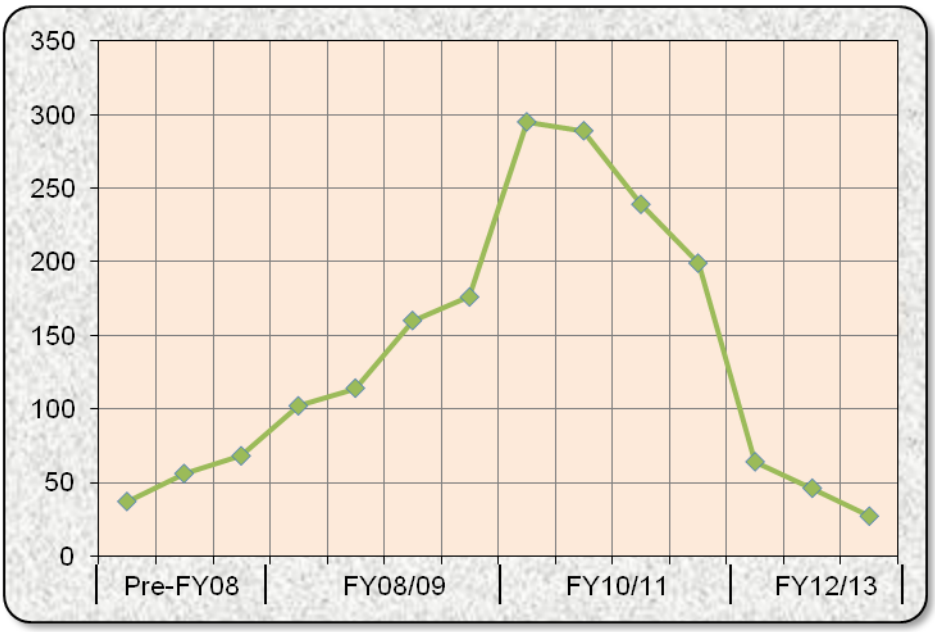

Figure P-3. Active Projects by Time Period

As indicated by Figure P-3, more than 170, or 45%, of the 370 IT projects were active before the FY10/11 biennium, and more than 60, or 16%, will still be active after the biennium. For FY08/09 41% of the 358 projects were active before the biennium and 14% were still active after the biennium.

1.3 Comparison to Previous Biennium

Some comparisons can be drawn between the current biennium and the previous two biennia as shown in Figure P-4 below.

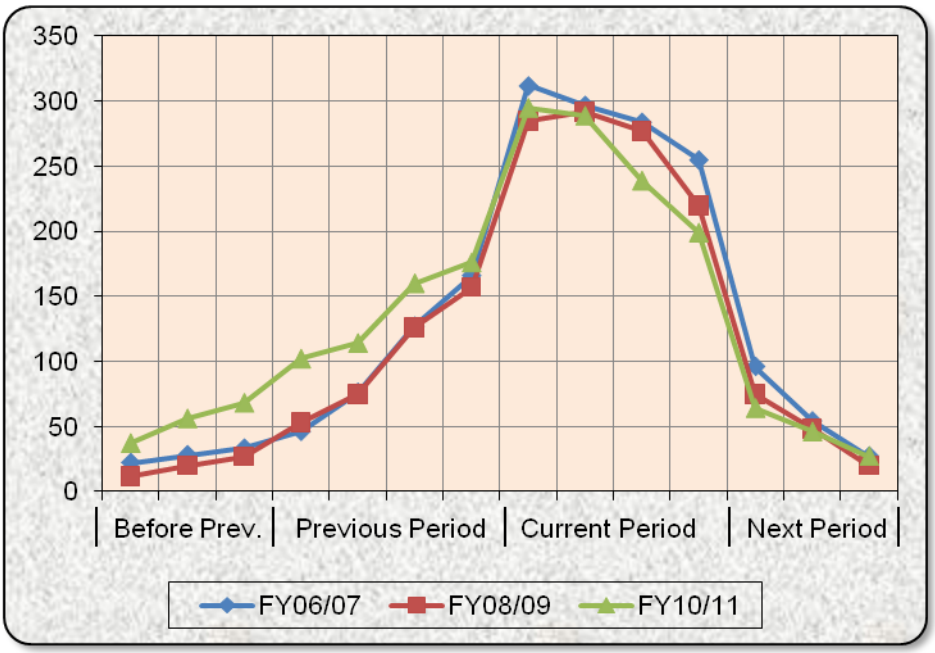

Figure P-4. Active Projects by Time Period

As is evident from the above line graph, a high number of projects became active at the beginning of the current period and end by the end of the current period. This indicates there are many projects with beginning and ending dates coinciding with the beginning and ending dates of the current period.

1.4 Mandated Projects

Planners were asked to choose whether a project was mandated (i.e. required by legislation or required for non-legislative purposes) or had no such mandate. Figure P-5 below displays the breakdown of the responses for the 370 IT projects. The overwhelming majority of IT projects are responses to needs other than mandatory compliance, legally or otherwise.

Project Requirement	Number of Projects
Mandate	88
No Mandate	282

Figure P-5. IT Project Requirement Type

2 IT Project Commonalities

The portfolio of IT projects displays a wide variation in project size, estimated budget, effort, purpose, technical approach and issues. However, when comparing agencies of similar size, the variations are less notable. To further explore commonalities among projects, they were classified as to type of project and project theme. The type of project was identified by project planners from four types provided by the planning application, while the themes emerged from extended analysis of the project planning information.

2.1 IT Project Types

Each project was classified by type as a New capability, Enhancement / Expansion, One-time requirement, or Other IT-related activity project. Figure P-6 below shows the number of projects in each classification and the percentage of all IT projects represented.

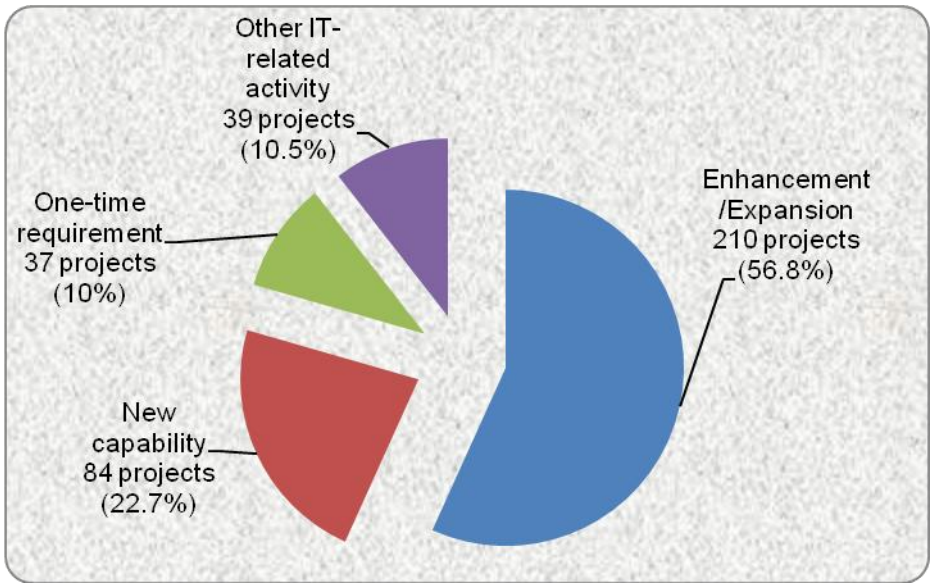

Figure P-6 Type of IT Projects by Number of Projects and Percentage

As illustrated, 79.5% of all FY10/11 projects split between New capability (22.7%) and Enhancement/Expansion (56.8%) project types.

2.2 IT Project Themes

The Project Name, Purpose, Technical Approach, Business Justification, Scope, and Success Criteria were reviewed for each of the 370 IT projects. From this information, common themes emerged and are described below in sections 2.2.1, 2.2.2, and 2.2.3. The number of IT projects involved is displayed in parenthesis.

2.2.1 Most Frequent Themes

Four themes stood out and together accounted for 57.7% of all projects. These themes were:

- **Upgrade Infrastructure.** Projects to upgrade the existing hardware, communications or software infrastructure (22.4%). (83)
- **Upgrade Existing Applications.** Projects that aim to upgrade or expand the capabilities of current applications (12.4%). (46)
- **Implement New Application**. Projects expected to implement a new application (not specifically a new on-line capability) (11.6%). (43)
- **Replace Legacy Systems.** Projects to replace one or more legacy applications or systems (11.3%). (42)

2.2.2 Moderately Frequent Themes

In addition to the four very frequent themes above, three themes occurred in 20 or more projects. These were:

- **Establish New On-line Service.** Projects to establish a new on-line service for an agency. (25)
- **Improve Security Architecture.** Projects that aim to improve the security architecture for an agency. (23)
- **Perform Requirements Analysis.** Projects that gather and define the requirements for anticipated IT efforts. (20)

2.2.3 Other Emerging Themes

Nine other themes emerged often enough – in three to eighteen projects – to be noteworthy. These were:

- **Improve Data/Information Environment.** Projects to improve the data exchange between applications, establish a better information reporting foundation, or improve data standards. (18)

- **Expand Web Capabilities.** Projects that expand the capabilities of existing Web/on-line services. (16)
- **Improve Business Processes.** Improve efficiency and effectiveness by performing workflow analysis.(11)
- **Migrate Platform.** Projects to migrate applications and data from one hardware, communication, or software platform to another, without significant changes in existing capabilities. (10)
- **Implement New Technology Service Capability.** Projects that will implement new services enabled by technology (e.g., content management, document management, and business intelligence). (8)
- **Improve Business Continuity.** Projects that will address business continuity issues (e.g., disaster recovery or pandemic preparedness). (7)
- **Conversion to state consolidated e-mail system.** Conversion from various email systems to a state consolidated system. (5)
- **Support Statewide ERP Solution.** Projects to accommodate the OAKS implementation. (4)
- **Augment Staff.** Projects that provide additional staff to the existing agency environment. (3)

2.3 Comparison to Previous Biennium: IT Project Themes

In FY08/09, the most frequent and moderately frequent themes were:

- Upgrade Existing Applications
- Upgrade Infrastructure
- Implement New Technology Service Capability
- Replace Legacy Systems
- Implement New Applications
- Improve Data / Information Environment

When comparing FY10/11 with FY08/09 the following observations can be made:

- Four of the five most and moderately frequent themes in FY08/09 are in the most frequent themes list for FY10/11.

- The two most common themes, *Upgrade Existing Applications* and *Upgrade Infrastructure,* may actually duplicate activities that should be documented in the maintenance planning categories (i.e., Application Maintenance and Infrastructure Maintenance). Until this apparent confusion can be addressed, accurate tracking of the IT budget by categories will continue to be difficult.
- The fourth most prevalent theme, *Replace Legacy Systems*, highlights a potential planning issue. The *Replace Legacy Systems* theme was assigned if the compelling purpose for the project was to replace one or more existing applications. If the compelling purpose was to move to the Web (i.e., the *Expand Web Capabilities* theme) or migrate platforms (i.e., the *Migrate Platform* theme), then those assignments were made. The planning question is how many interim steps are desired or necessary between existing architectures and Web-based architectures?
- Migration to a browser-based Web environment continues at a good pace.
- *Improve Security Architecture* increased by over 75%, from 13 projects in FY08/09 to 23 projects in FY10/11 indicating a greater emphasis on security.
- *Perform Requirements Analysis* increased from 2% of the projects in FY08/09 to over 5% of the projects in FY10/11. This would suggest agencies are identifying analysis related activities as a separate project to defining their future projects.

3 Consolidated Observations

The following summary of observations from this sub-report highlights the more critical issues from the IT project perspective of agency plans. Each observation ends with a reference to the supporting report section:

- The increase of longer projects (i.e., 5-6 and 6+ years) over previous planning periods probably reflects the continuing efforts to implement OAKS and increase its presence across the enterprise. (1.1)
- The *Replace Legacy Systems* project theme probably reinforces the OAKS conclusion noted above, as well as reflecting the continued movement of applications to the web. (2.4)
- The *Improve Security Architecture* project theme highlights the continued focus on the improvement of the security environment that supports agency applications. (2.4)

Contact

For further information concerning items found in this report, please contact:

Nadine Williams
Sr. IT Planning Analyst
Ohio Department of Administrative Services, Office of Information Technology
Nadine.williams@oit.ohio.gov
614.466.7468

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