



IT Governance and Portfolio Management at TEA

Sharon Gaston, Deputy CIO / Director, PMO
Ken Bucher, Manager of IV&V
Texas Education Agency

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Agenda

- Introduction
- IT Governance and Portfolio Management at TEA
- The Evolution of IT Governance and Portfolio Management at TEA
- TEA's eGrants Project, A Case Study
- Summary and Lessons Learned



Who we are

- Sharon Gaston – Deputy CIO/Director, PMO
 - Twenty years in private sector with companies such as: Texas Instruments, Tandem Computers (now HP), Tivoli/IBM, and Thomson Financial (now Thomson/Reuter's).
 - Career progressed from diagnostic engineer at TI to VP of Development at The Thomson Corporation.
 - Four years with TEA directing the Project Management Office.
- Ken Bucher – Manager, Independent Verification & Validation
 - Over 30 years in private sector companies such as: IBM, Lawson Software, Qwest.
 - Career progression from Tabulator Operator to Divisional CIO at IBM.
 - Public service career began at TEA in 2001 as a Process Engineer.



Introduction

- IT Governance and Portfolio Management
 - Two distinct and massive subject areas
 - Not a clear industry definition of either
 - If you develop and deliver product you practice both (formally or informally)
 - You can benefit by:
 - Defining these concepts for your organization
 - Understanding where your organization is right now
 - Identifying where you want to go
 - Developing a phased approach to get there



TEA

- The Mission of the Texas Education Agency (TEA) is to Provide Leadership, Guidance and Resources to Help K-12 Schools Meet the Educational Needs of all Students

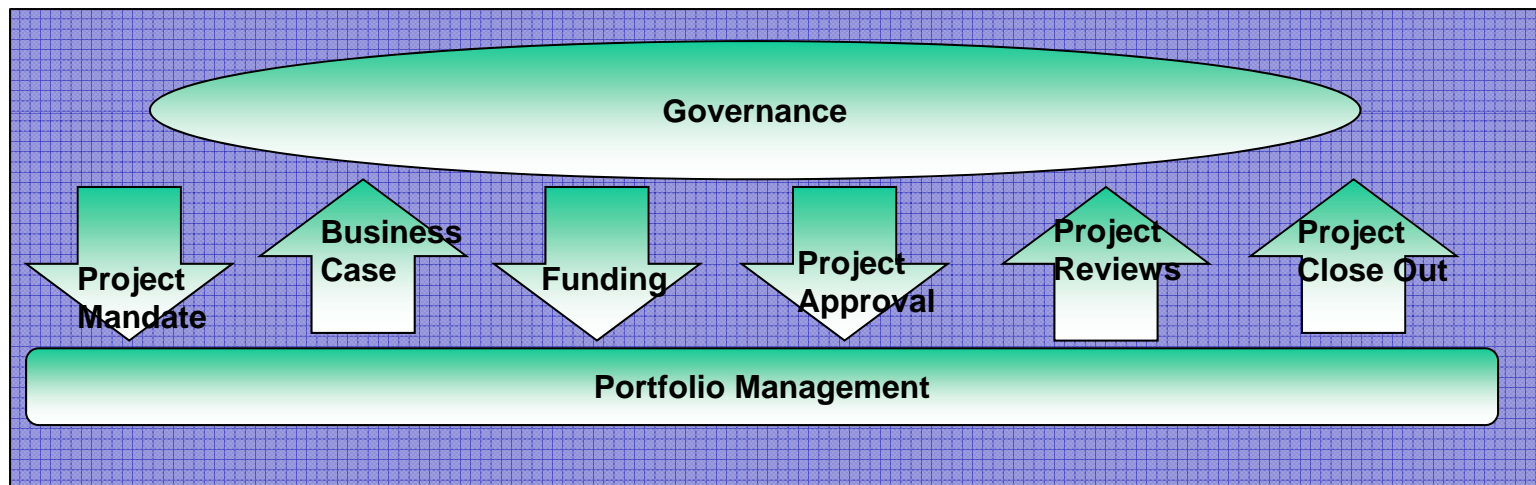
- TEA Supports
 - 1,200+ Independent School Districts
 - 8,000+ Schools
 - 385,000+ Professional Staff (teachers, administrators, counselors, etc)
 - 4.6 Million+ Public School Students

- TEA IT Stakeholders Include
 - State Board of Education
 - Districts, Campus and District Administrators, Educators, other State Agencies
 - the Federal Government
 - IT and Business Groups within TEA
 - Students, Parents and Tax Payers



TEA'S Need for IT Governance and Portfolio Management

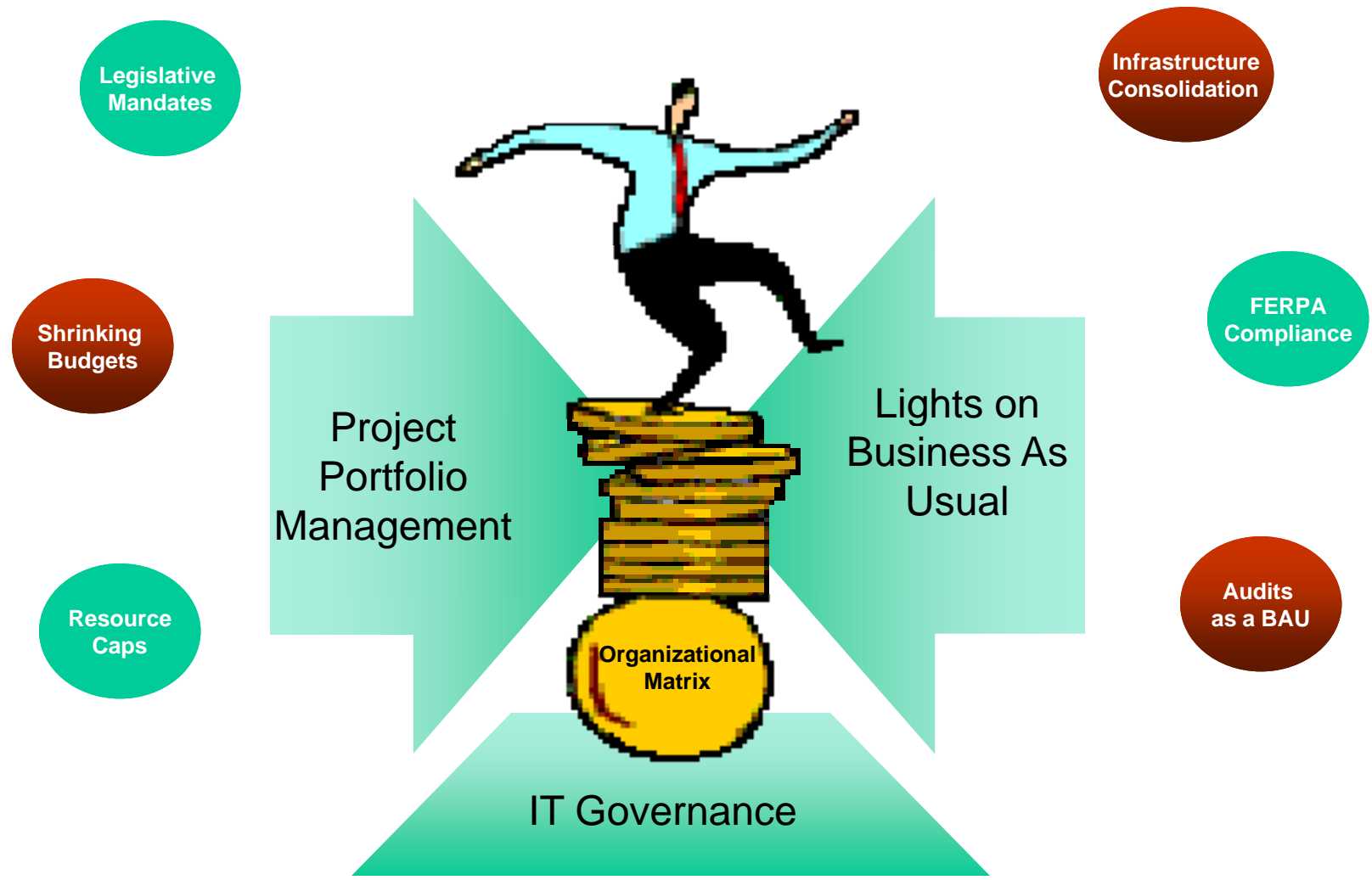
The Texas Education Agency (TEA) has embarked Upon an Effort to Rationalize and Transform its IT and Business Portfolio to Improve Efficiency and Provide Better Service to its Stakeholders with a Focus on Governance and Portfolio Management required to Support Service Oriented Architecture (SOA).



- IT Governance is the decision making and approval process that define how people, processes and technology work together to achieve the organizational goals.
- Portfolio Management is a component of governance that define the processes and methods for analyzing and collectively managing a group of current or proposed projects based on defined key characteristics.



TEA's IT Challenge



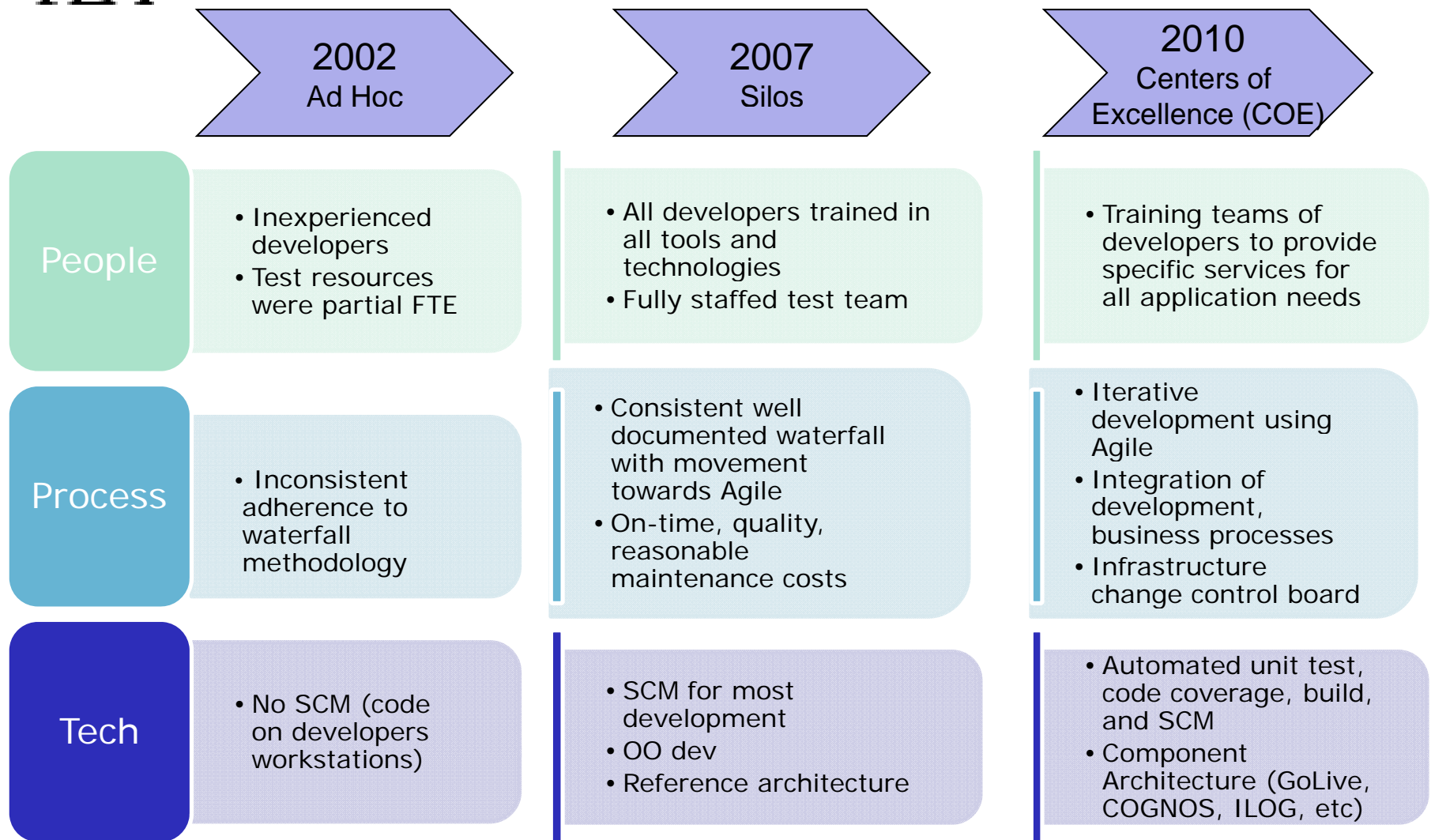


TEA's Scope and Scale Add IT Complexity

- Ongoing Requirements Revisions from Federal and State Legislation
- 80+ Legacy and New Applications
 - Texas K-12 Public Schools Funding, Grants, Entitlements (> \$20B /yr in funds management / distribution)
 - Textbook management (> \$150M / yr)
 - Data gathering / analysis / reporting / compliance (>4M schoolchildren, > 1200 school districts)
 - Teacher certification tracking (> 400K active teachers)
- IT Development Staff of 150 FTEs (40%) and Contractors (60%)
- Infrastructure Under Consolidation
 - 300+ Servers (Windows and AIX)
 - 560 Databases with 8.3+ TB of data
 - Minimal mainframe legacy
- New development is C#(80%) , Java (20%)
- Virtually all web based applications
- Public Access to reports has exceeded 1M hits in 48 hours



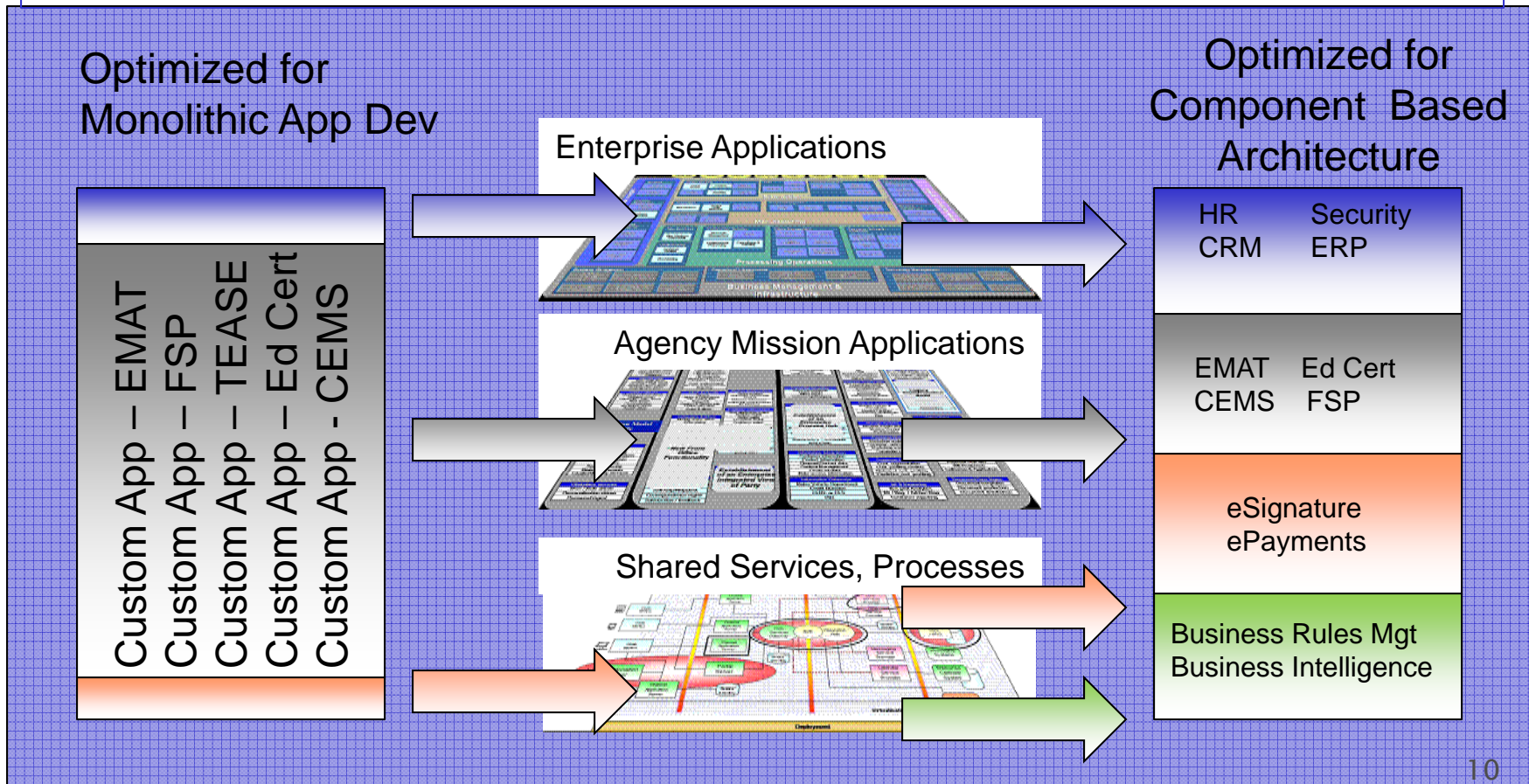
TEA IT Governance & Portfolio Management Evolution





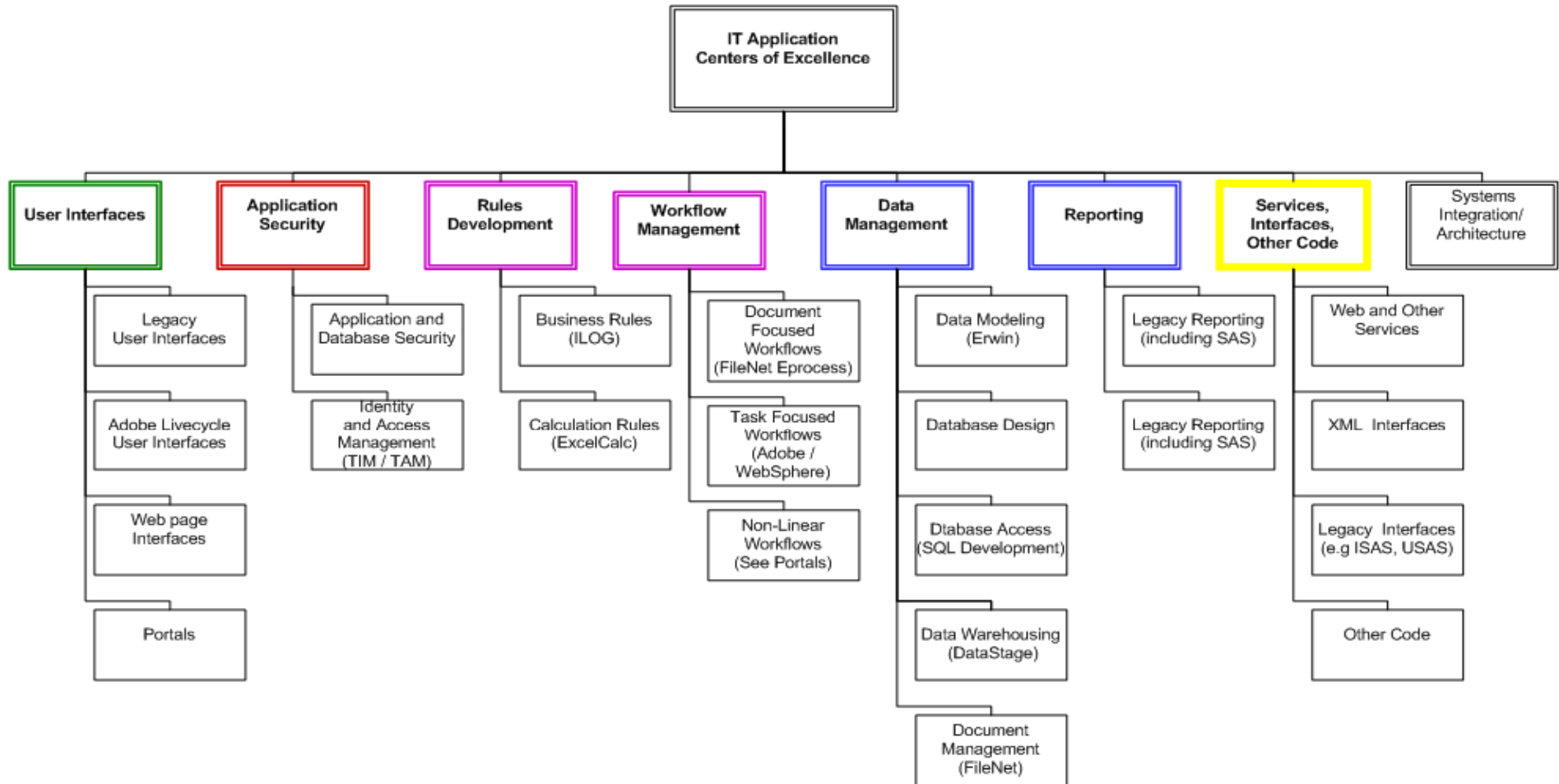
TEA Application Efficiency Evolution

As the organization and the tools have matured we have evolved our efficiencies to leverage emerging tools and meet the challenge of doing more with less.



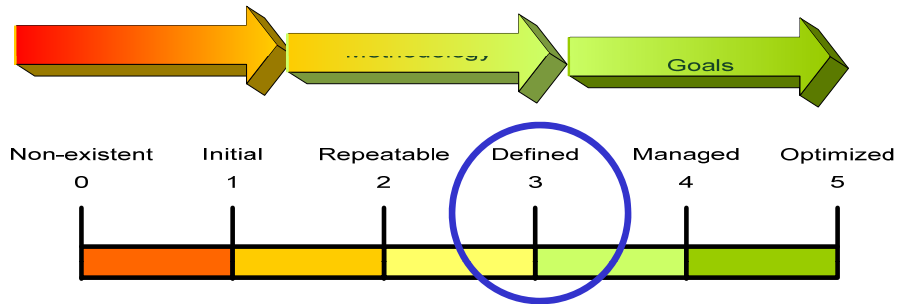


TEA Centers of Excellence



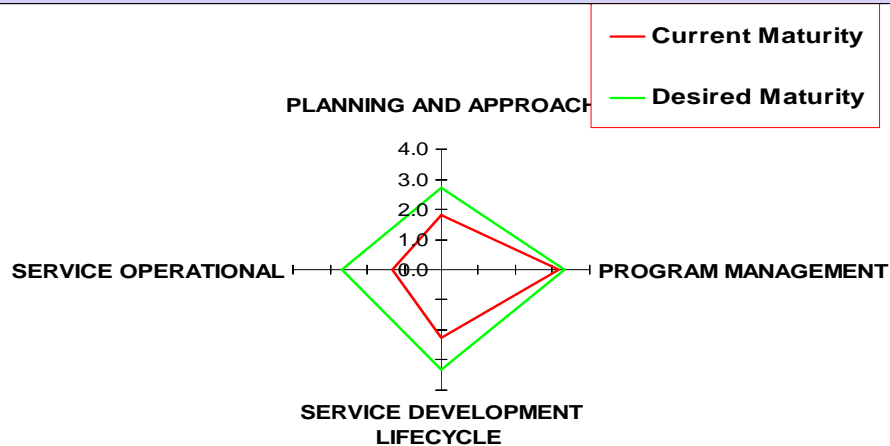


Governance Domains: Our Report Card



Legend for Rankings Used

- | | |
|----------------|---|
| 0 Non-existent | - Management processes are not applied at all |
| 1 initial | - Processes are ad-hoc and disorganized |
| 2 Repeatable | - Processes follow regular pattern |
| 3 Defined | - Processes are documented and communicated |
| 4 Managed | - Processes are monitored and measured |
| 5 Optimized | - Best practices are followed and automated |



- Governance maturity model was developed by IBM and uses standard Control Objectives IT (CoBIT)

- CoBIT is an international standard in directing and controlling an enterprise's information technology

- CoBIT sets the standards of measuring IT Governance process maturity and CMMi based maturity levels**

- Assessment of TEA's current SOA Governance maturity level by Robert Laird, IBM



Achieving TEA's Evolution (18 months)

	Current Challenges	Planned Actions	Expected Results
People	<ul style="list-style-type: none"> • Teams work in a silo 	<ul style="list-style-type: none"> • Reorganize and train for COE 	<ul style="list-style-type: none"> • Expertise in component technology
Process	<ul style="list-style-type: none"> • Some waterfall process remains • Processes oriented toward large monolithic projects 	<ul style="list-style-type: none"> • Refine current Agile to incorporate continuous integration • Develop light weight processes 	<ul style="list-style-type: none"> • Shorter development cycles without sacrificing quality • Services and Re-usable components
Technology	<ul style="list-style-type: none"> • Absorbing recent technology acquisitions 	<ul style="list-style-type: none"> • Training, prototyping and pilot projects 	<ul style="list-style-type: none"> • Effective use of modern technologies to support goals above



TEA's eGrants Project

A Case Study



TEA's eGrants Project: A Case Study

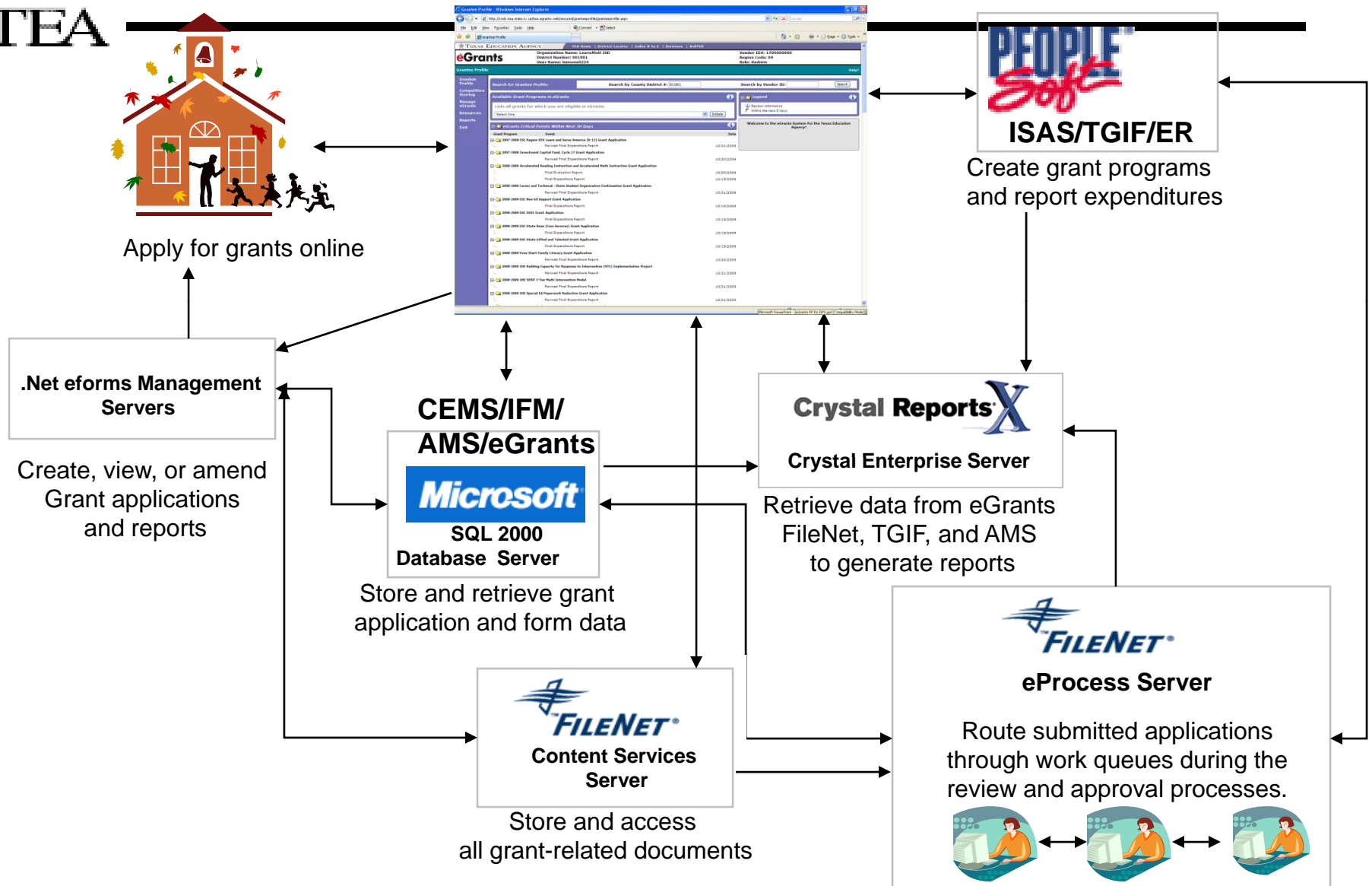
What Is eGrants?

A comprehensive web portal that:

- Provides online submission, tracking, reviewing, and processing of TEA grant applications
- Provides online grant evaluation, reporting, financial and program information
- Enables grant applications to be routed electronically through the review process
- TEA's eGrants project moves around \$12 b per year to Texas schools
- Approximately 90 of 160 available grants are implemented via eGrants

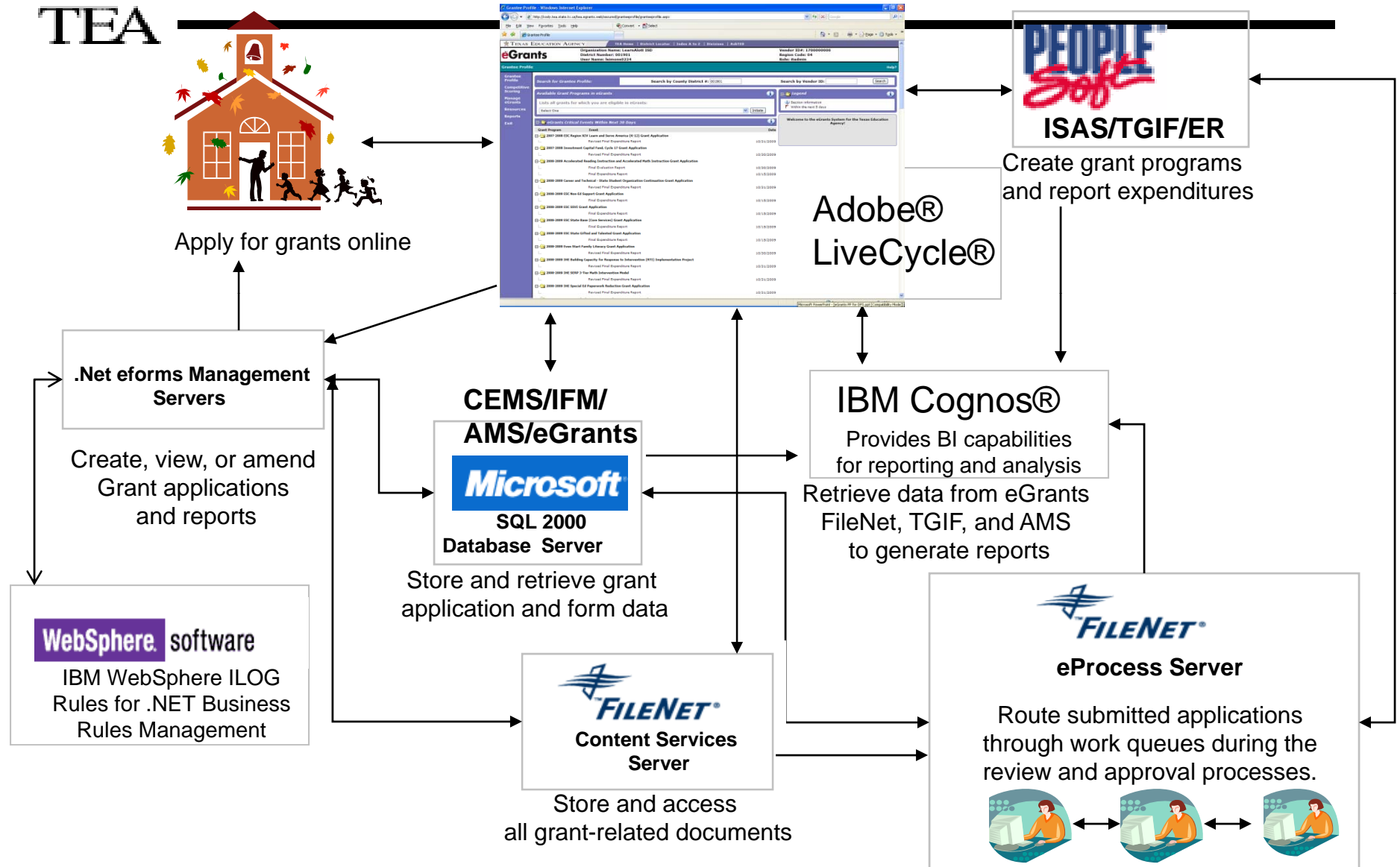


TEA eGrants System Interface Diagram





TEA eGrants Evolving System Interface Diagram





eGrants Application History

- Started in 2002 and first release was summer of 2004. This was using the Liquid Office process.
- Won Best of Texas award in 2005.
- The system was rewritten in 2008 to remove the Liquid Office process and replace it with a template-based .NET structure. This allows the reuse of specific, configurable templates on multiple grants.
- In 2009 versioning of templates was added. This allows a template on a specific grant to be altered within the grant period.



eGrants' Agile Experience

- **Project Management Benefits**
 - **Faster requirements gathering.** The stakeholder is involved from beginning to end of the requirement-development process allowing for quicker response.
 - **Traceability of requirements** to design to development to testing is improved because the full team is involved in all aspects.
 - **Work tracking is significantly improved.** The agile process allows for the work to be segmented into discrete parts to allow for greater control and faster release to production.
- **Business Process Lifecycle Benefits**
 - After development, the full process cycle (from notification of need to opening of the grant to the public) of ARRA grants awarded to the state in March 2009 took 6 weeks from a typical release schedule of 3 months.
- **Quality Benefits**
 - No missed Production Schedules
 - High code Quality, few field problems to date
 - Software Configuration Management (SCM) is excellent
 - No field problems caused by SCM
 - Regular Configuration Audits built into system



eGrants' Agile Experience cont'd

- Challenges

- Significant demands on the customers time
- Testing model had to change (started earlier and had less time for integration testing on back-end)
- Adding automated unit testing was difficult
- Added automated integration testing (developing and testing simultaneously)
- Develop a new branching strategy to support multiple sprint teams



In Summary, TEA is Still Learning

- Incorporating Change is Challenging
 - IT Governance and Portfolio Management changes like SOA and Agile impact the entire organization
 - Reflect the 'Culture' of the Institution
 - Be Understood and Supported by all Stakeholders
 - Stage changes if possible, avoid significant changes in people, process, technology at the same time
- The Learning Curve for Advanced Technology is Steep
 - Ensure adequate training and lead-time, seed teams with experienced staff if possible
 - Incorporate pilot with end-to-end processes to assess issues early
 - Stay within defined tool vendor product versions and integration guidelines to ensure best of breed tool integrations function properly
 - Gain efficiencies by developing management tools to automate new processes
- Managing the Change Process is Imperative
 - Include a defined process with clear roles and responsibilities
 - Provide a reporting, measuring and feedback process



Thank You!

Sharon.Gaston@tea.state.tx.us
Ken.Bucher@tea.state.tx.us