Bootstrapping Enterprise Standards

A Real World Approach

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Abstract

The value of basing activities within an enterprise on standards is undeniable, but how does one move a large enterprise to a standards-based approach? An existing enterprise does not provide a "clean slate" for standards, which creates both challenges and benefits - existing "enterprise memory" must be balanced with moving toward industry best practices. Also critical is avoiding the pitfall of "pie in the sky architecture" and instead leveraging standards for goal-oriented and concrete benefits. This presentation will discuss practical strategies for making the transition to standards based architecture, addressing key topics around establishing, governing, and maintaining standards.

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Presentation Overview

- About the Citizens Enterprise
- What is a standard?
- A Bootstrapping “How to”
- Where are we? Lessons learned.
- References
- Questions

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About the Citizens Enterprise

Some background information

About Citizens Bank Financial Group	
9th Largest Commercial Banking Company in the US	
States	40
Employees	25,000
Assets	$160 Billion
Branches	1600

- Very collaborative environment
- "Get it done" vs. rigorous process
- Limited IT resources outside production support and funded projects
- Not all IT is under a single management umbrella

About the Citizens Bank Environment

- Centralized Infrastructure Support
- 40+ Specialized Technology Groups
  - Centralized and non-Centralized
  - Distributed Business Line IT
- Heterogeneous Computing Environment
  - Legacy Mainframe
  - 25,000 Microsoft Desktops
  - 500 Unix Servers
  - 2100 Windows Servers
- Buy vs. Build with heavy customization (COTS)
- Introduced SOA in 2002
- 200+ Annual Technology Projects

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What is a Standard?

"A document established by consensus and approved by a recognized body that provides for common and repeated use, rules, guidelines or characteristics for activities or their results, aimed at the achievement of the optimum degree of order in a given context."

- *ISO/IEC Guide 2:1996, definition 3.2*

What is a Standard?
(redux)

A standard is:

- A process, rule, and/or guideline
- that optimizes activities and results
- is clearly documented, and
- approved by authorized body.

Examples of standards

- Database object naming conventions
- Web server hardening requirements
- WebSphere MQ standard configuration
- Technical design documentation
- Standards lifecycle process (“meta standard”)
- Software configuration management principles

The Value of Standards

Internal Standards

- Repeat success
- Replicate success across resources
- Reuse assets you already own and capabilities you already have

External Standards

- Share in other's lessons learned
- Hire pre-trained resources

Standards at Citizens

THE BAD

- Sparse published standards
- Wide discrepancy in the quality of standards
- No standard for standards!

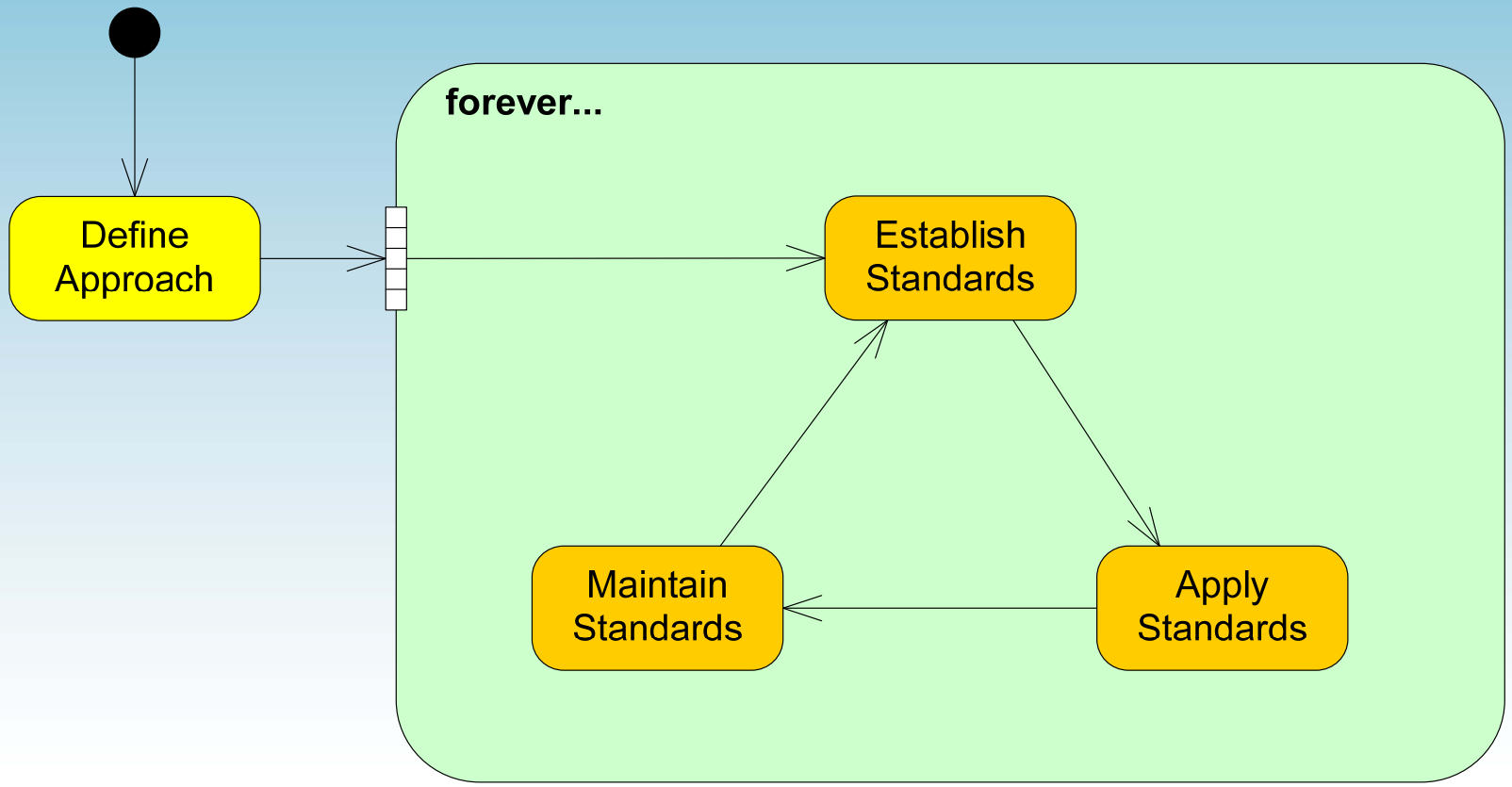
THE GOOD

- 2007/8 regulatory project drove standards adoption
- Identified as supporting 2008 IT goals
  - Improve availability
  - Decrease time to market
  - Improve problem resolution

The "Must Do" List for Bootstrapping

- ❑ Define a standards lifecycle
- ❑ Establish standards governance
- ❑ Market the value of standards
- ❑ Identify existing "standards-like things"
- ❑ Identify pain points due to standards gaps
- ❑ Launch the standards lifecycle…

Define a Standards Lifecycle



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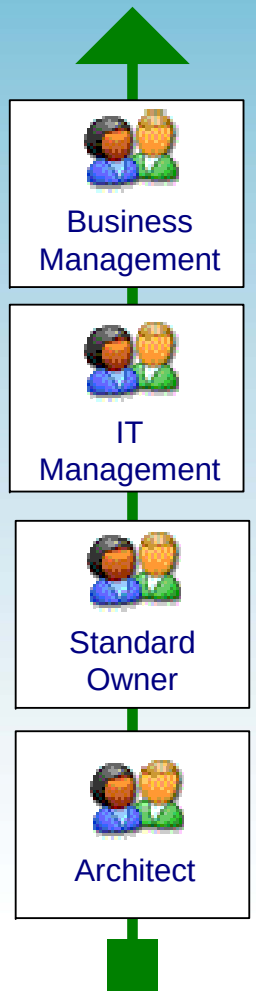
Standards Governance Model

It must be R.O.I. Driven!

- Natural consequences!
- Identify risk and **cost** of non-compliance
  - Require risk acceptance and mitigation
  - Charge accordingly
  - Require formal acceptance of risk
- Govern standards early and often
  - RFP/RFI, Contracts, PDLC



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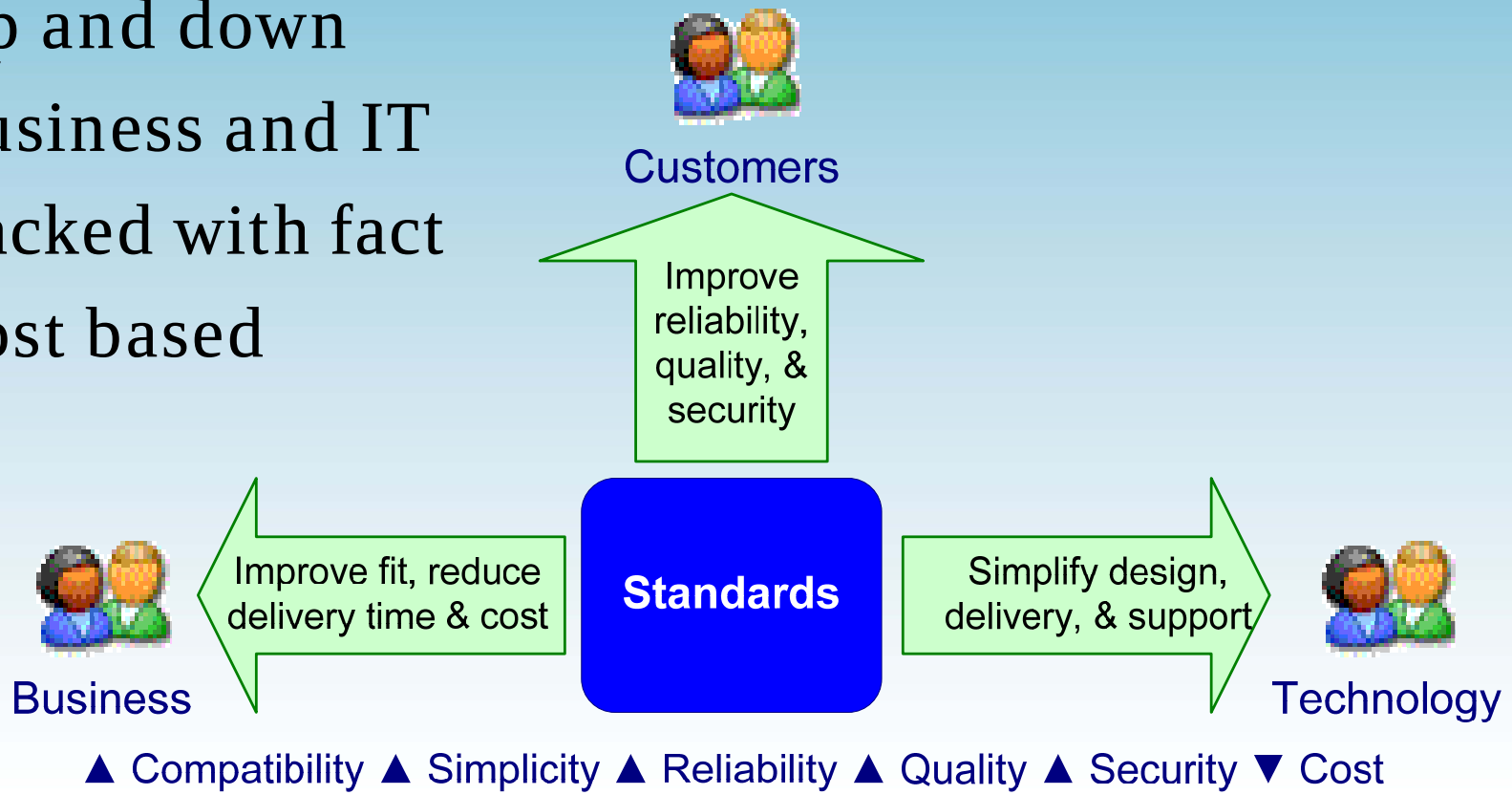
Market Value of Standards

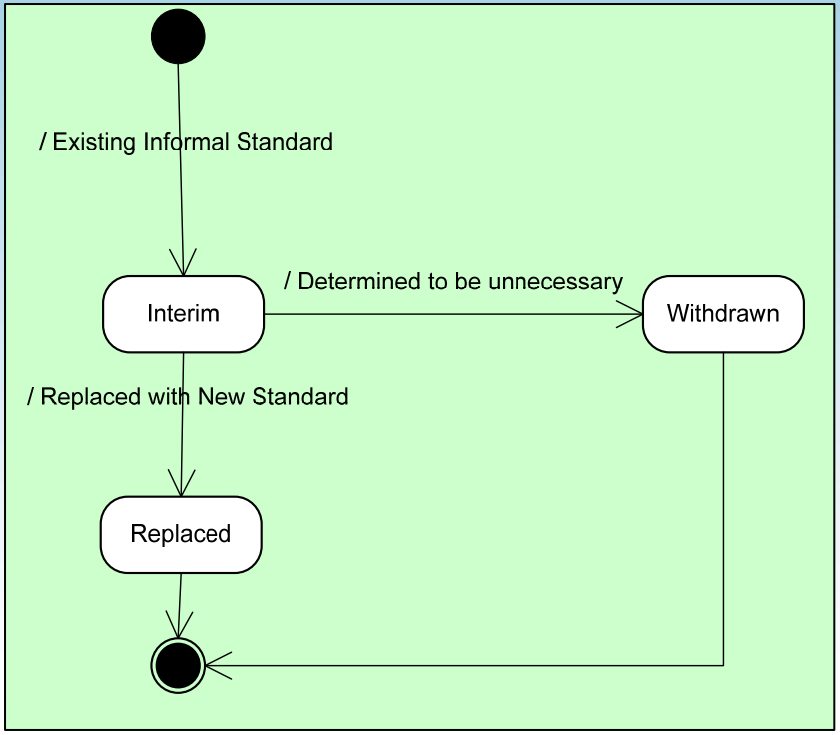
- Up and down
- Business and IT
- Backed with fact
- Cost based



Identify Existing Standards

Jump start with what you have

- Identify and categorize existing standards and standard-like things
- Label as “Interim”
- Publish centrally
- Soften governance



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Citizens Interim Standards

- Working group driven effort identified 93 interim standards.
- Published centrally via Sharepoint.
- Identified replicated, unaligned standards

Infrastructure	4
Systems Management	3
PDLC Governance	2
Business Analysis	1
Data Management	6
Design	38
Development	21
Integration	14
Support	4

Identify Pain Points

Resulting from missing/weak standards

- Brainstorm!
  - Facilitated session
  - Suggestions Box
  - Homework
- Prioritize based on pain, cost of implementing, and measurability
- Map pain points to standards gaps
- Check interim standards for low hanging fruit

Standards Brainstorming Triggers

Service Categories
Infrastructure
Systems Management
PDLC Governance
Business Analysis
Data Management
Design
Development
Integration
Support

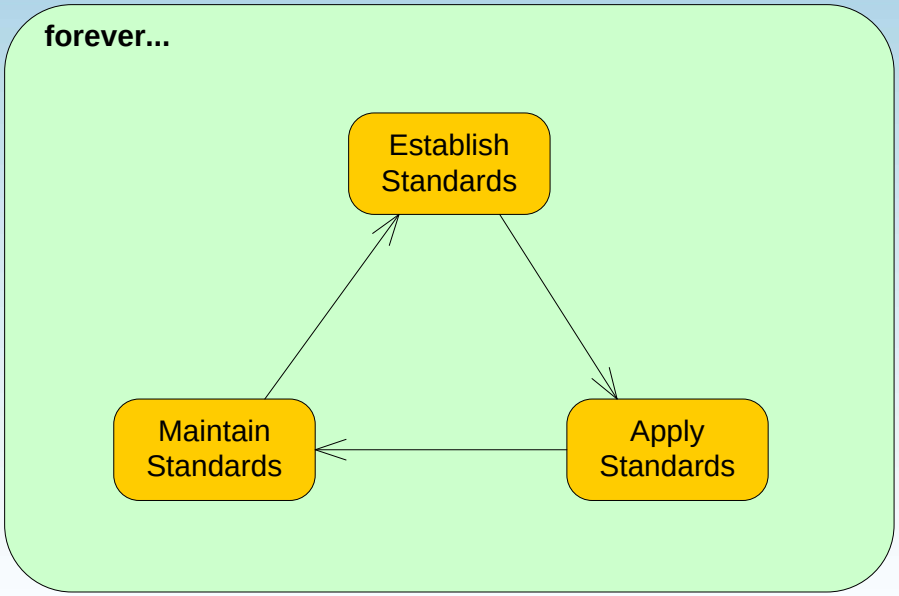
Projects

Types
Technology (ingredient)
Pattern (recipe)
Process (consistent approach)
Documentation (clear communication)

Departments

Launching the Lifecycle

- Executive support critical for
  - Approval
  - Governance
- Management support critical for
  - Resourcing
- PMO support critical for
  - Governance



Citizens Progress

4 Months In…

- Documented standards approach and lifecycle
- Published interim standards
- Completed pain point analysis and identified initial standards to develop
  - Design artifact lifecycle
  - Project approach across technology teams
  - Web service standards
- 2 standards proposed for approval
- 4 additional were proposed and deferred

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What Worked…

- Starting with one department
- Employing a collaborative process
- Establishing Standards Working Group
  - Aligning with member interest
  - Forced listening
- Publishing interim standards
- Identifying and prioritizing pain points

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And what needs work

- Very difficult to make progress “part time”
- Skepticism due to historical efforts
- Not explicitly a “top down” driven effort
- Review board not yet established
- Starting with one department
  - When is right time for more?
- Taking it to the streets

References

- Open Group Standards Process
  - http://www.opengroup.org/standardsprocess/main.html
- WCC Maturity Levels
  - http://www.w3.org/2005/10/Process-20051014/tr.html#maturity-levels
- ISO Standards Dveelopment
  - http://www.iso.org/iso/standards_development.htm
- Systems Flow Web Site
  - http://www.sysflow.com
  - *Previous Open Group Presentations are available*

QUESTIONS?

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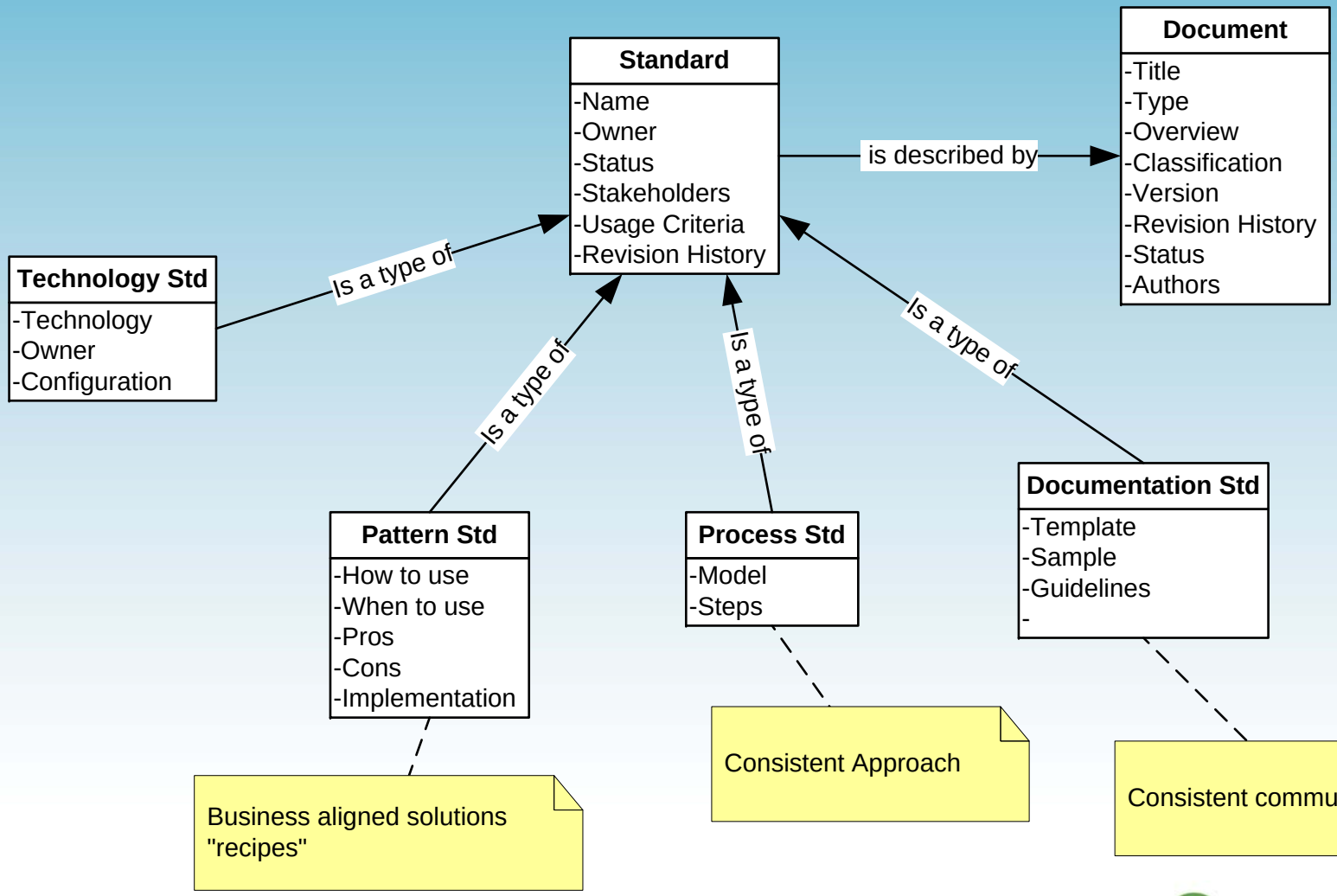
Dan Hughes (daniel.hughes@sysflow.com) is a principal consultant with Systems Flow, Inc. He is is currently engagement lead at Citizens Bank where he guided the launch of the enterprise architecture practice and is now the lead architect for Citizens Bank's Basel II implementation. Dan has 16 years of software engineering experience spanning a broad range of technologies and techniques. Startup to enterprise, he has launched, managed, and executed all aspects of both product and enterprise life cycle for clients in industries ranging from industrial automation to banking and insurance. He maintains a blog on software engineering at xengineering.com. He holds a Bachelor of Science in Computer and Systems Engineering from Rensselaer Polytechnic Institute.

Graham Williams (graham.williams@citizensbank.com) is a Application Manager with 12 years of experience designing, developing, and supporting enterprise technology solutions for the financial services industry. Graham currently works for Citizens Bank, where he leads the team responsible for the architecture and design of technology solutions. He has a B.S. in Chemical Engineering from Oklahoma State University and an Masters in Business Administration from the University of Oklahoma.

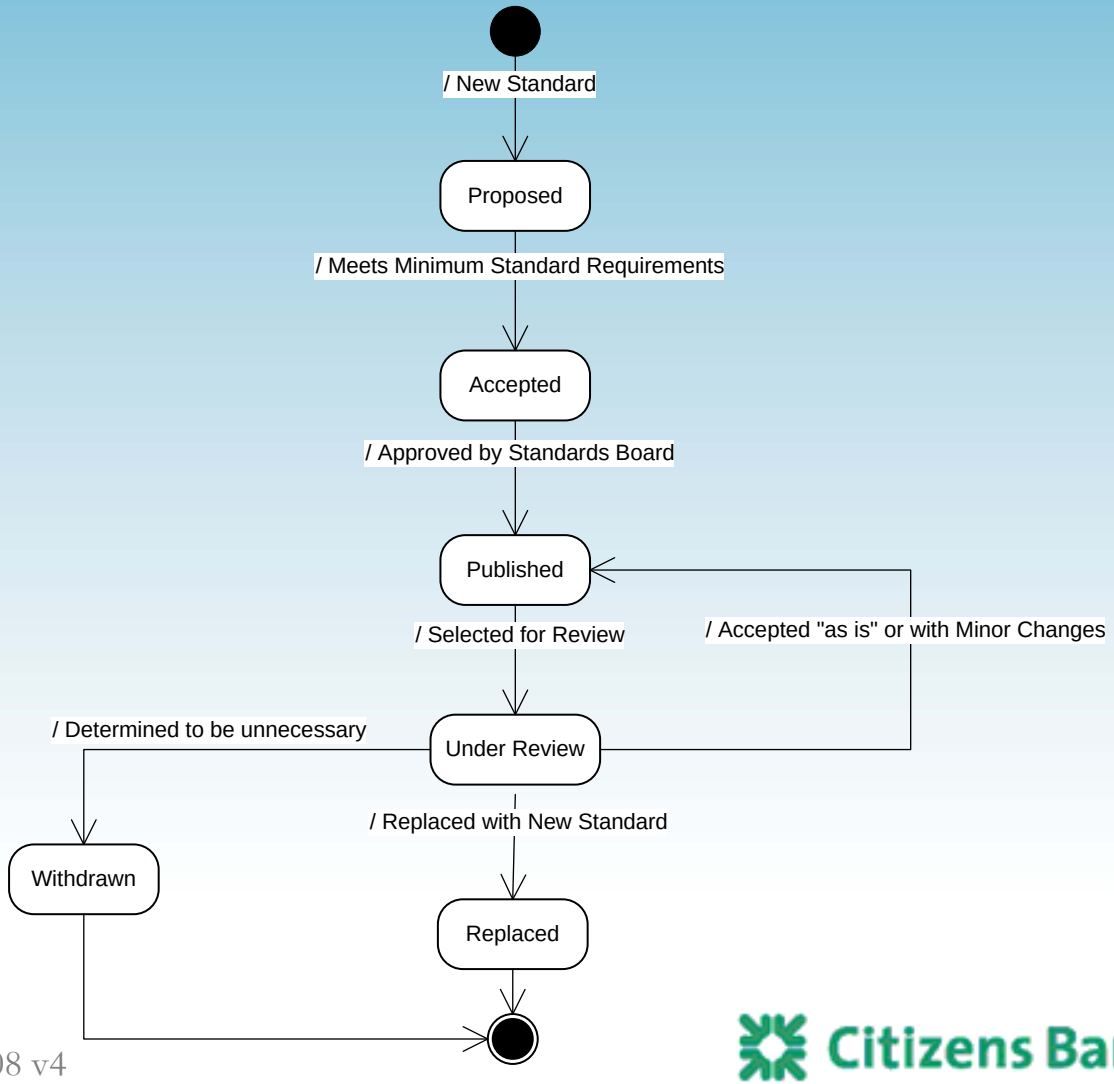
Jim Robinson (james.robinson@citizensbank.com) is a solution architect with 12 years of experience designing, developing, and supporting enterprise technology solutions in a variety of industries. Jim currently works for Citizens Bank on Graham's Solution Design Services team. Prior to working in information technology, he was a mechanical engineer in the United States Navy. He has a B.S. in Sociology from SUNY and has started work toward his M.S. in Computer Science from Brandeis University. He is an IEEE member since 2005 and was recently certified in ITIL.

Appendix

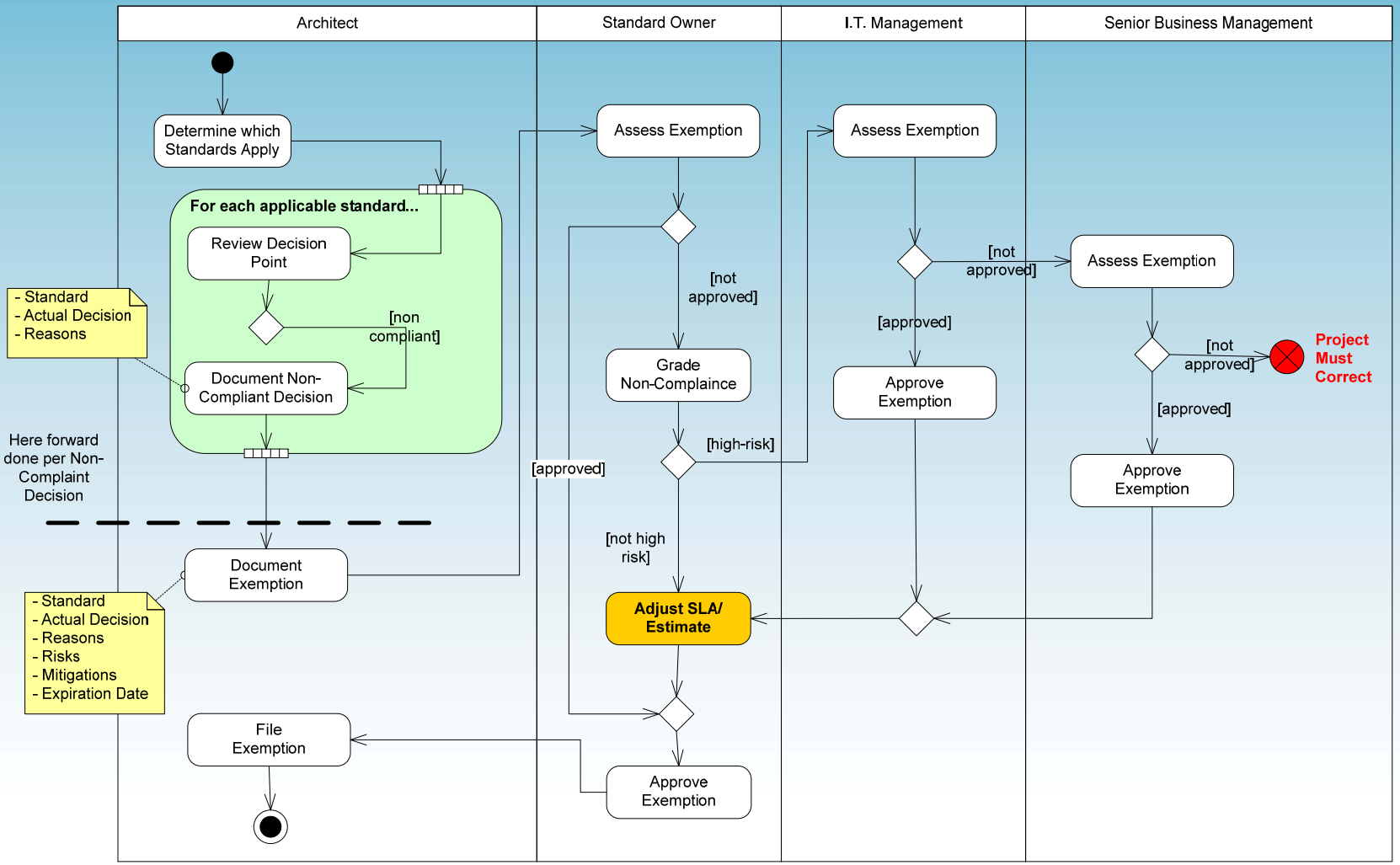
Standards Types



State Chart – Standards States



R.O.I. Based Standards Governance Model



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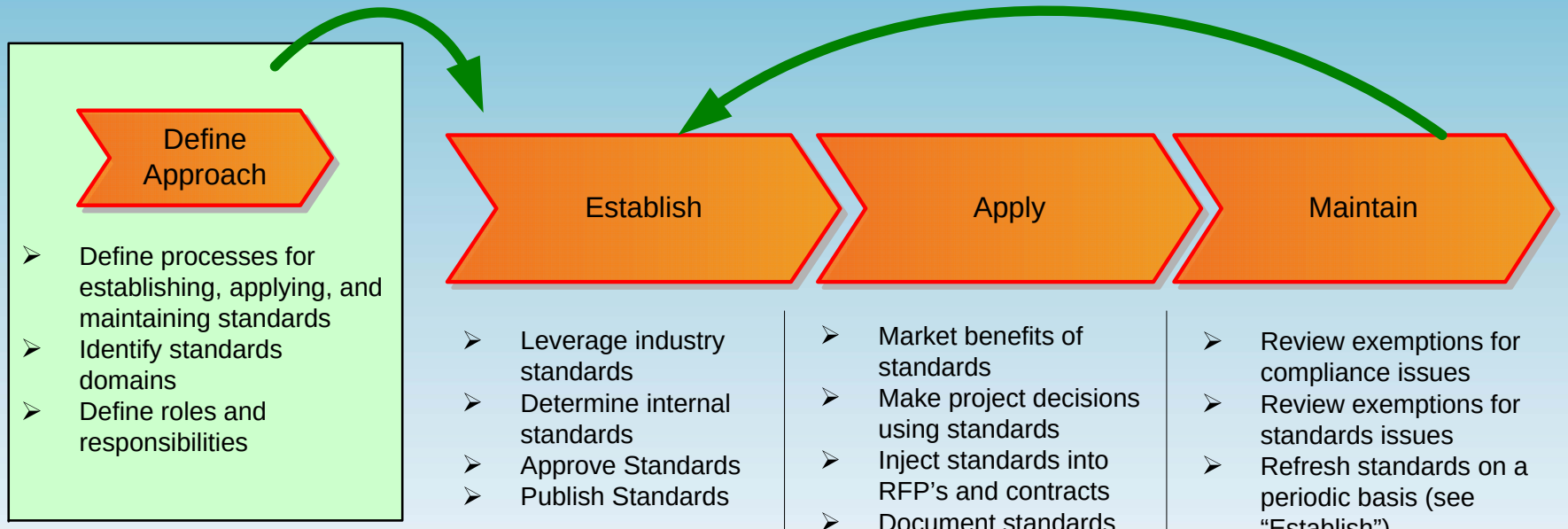
Proposed Standards Lifecycle



- Define processes for establishing, applying, and maintaining standards
- Identify standards domains
- Define roles and responsibilities

- Leverage industry standards
- Determine internal standards
- Approve Standards
- Publish Standards

- Market benefits of standards
- Make project decisions using standards
- Inject standards into RFP's and contracts
- Document standards exemptions
- Associate cost with non-compliance
- Review open exemptions at budget time
- Test against standards

- Review exemptions for compliance issues
- Review exemptions for standards issues
- Refresh standards on a periodic basis (see "Establish")