

# IT Board Update

Portland Community College

2017

Office of the CIO



# Agenda

1. IT Strategy
2. InfoSec: Defense in Depth (DiD)
3. Portfolio Management

Appendix: IT Strategy Additional Slides

# IT Strategy



# Our Vision



Information Technology



To be a nationally recognized standard for Higher Education Information Technology organizations by providing predictable, quality and cost effective service to Portland Community College and driving excellence in education through technology innovation.



# Our Mission



## Enable Student Success

We leverage technology, innovation and the passion of our employees to support opportunity & equitable student success.



## Optimize Enterprise Architecture

By making the right technology and investment choices through intentional design practices, we ensure our solutions are optimally aligned to stakeholder need and are intelligently architected, maintainable, sustainable, equitable and inclusive.



## Secure the Institution

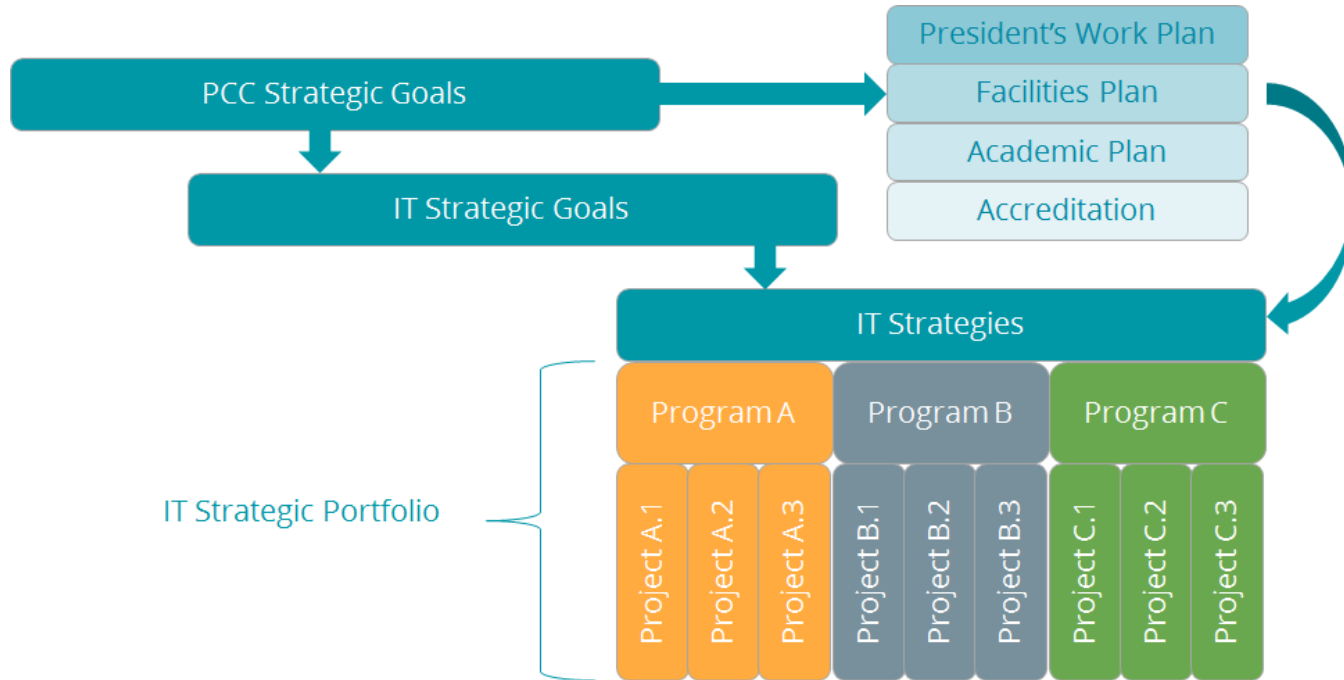
The privacy and protection of our students, faculty and staff is our primary concern. We achieve this by executing a pro-active and ongoing strategy against all forms of cyber attack. In doing so, we protect the institution from risk and ensure regulatory compliance.



## Deliver Operational Excellence

We embrace a culture of process efficiency, productivity and client service. We strive for district wide consistency of internally and externally facing IT services, while being agile enough to support local needs.

# A Collaborative Framework



# Strategies



## Enable Student Success

Align IT to academic plan

Be educational futurists

Improve the student experience

Support data-driven decision making

Leverage technology to support those most in need



## Optimize Enterprise Architecture

Adopt standard methodology

Make sustainable technology choices

Identify stakeholder needs and strategies

Complete current/future state gap analysis

Develop and maintain an IT roadmap



## Secure the Institution

Execute on 2016 InfoSec program

Maintain policy, governance and controls

Maintain operational vigilance

Promote cybersecurity awareness

Be compliant



## Deliver Operational Excellence

Organize for success

Be a data informed operation

Own a culture of sustainability

Provide best in class services

Be a model for DEI

# InfoSec: Defense in Depth (DiD)





# Defense in Depth (InfoSec Roadmap)

## Network

Network Access Control (NAC)

F5 Upgrade and Application  
Firewalls

Dark Web/Anonymizers

SandBlast

CheckPoint Firewalls

Network Zones  
(DMZ, DDC, InfoSec, etc.)

## Network Redesign Project (NRP)

## Servers

NSX/Microsegmentation

Tenable Vulnerability Assessment

DDC Server Support Strategy &  
Password Manager Pro

Server Zone Migration &  
Separation of Environments (SOE)

24/7 Network Operations Center

Data Center Security & Facilities

## Virtualization (VMWare)

## End Points

JAMF & Apple End Point  
Management

DUO 2-Factor Authentication &  
Secure VPN

McAfee End Point Protection

Patch Management

High Value Workstation Support

Access Control & Separation of  
Duties (SOE)

## Active Directory

## Data

"Data at Rest" Strategy

"ED to AD" & SHA-2 Password  
Encryption

Virtu Email Encryption

Banner Data Defense

Google Security

Consolidated Backups

## Access Control & Encryption

## Forensics

Splunk SIEM

MalwareBytes

EnCase eDiscovery

Network & Server Monitoring  
(SolarWinds, Apcon, Extrahop)

Google Analytics & CheckPoint  
Reporting

Incident Management  
(JAR, Red Flag, etc.)

## Cyber Team

## People

NCSAM

Communication  
(Message from CIO, Phishing Videos, etc.)

Compliance Programs  
(Red Flag, PCI, Penetration Testing, NIST)

Policy: ISP & AUP

Educate Leadership  
(Regulatory Compliance, etc.)

Engage Board of Directors

## CIO Priority

IT Staff Engagement  
(Program/Roadmap, Annual  
Cyber Security Offsite,  
Management Buy-In, etc.)

Not Started

In Progress

Done/Ongoing

# Gartner InfoSec Maturity Score

## Your Results

Friday, August 12, 2016

Your role score is 3.1 and your role maturity is Level 3: Defined  
Benchmark Score for All: 2.9

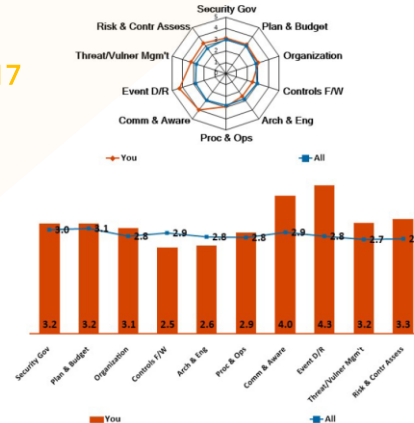


## Level Detail

...is 3.1 and your re for All: 2.9...

2017

...is 3.8 and your re for All: 2.9...



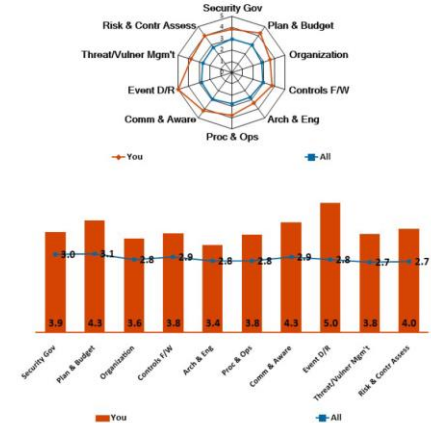
## Your Results

Thursday, September 21, 2017

Your role score is 3.8 and your role maturity is Level 3: Defined  
Benchmark Score for All: 2.9



## Level Detail



# Portfolio Management

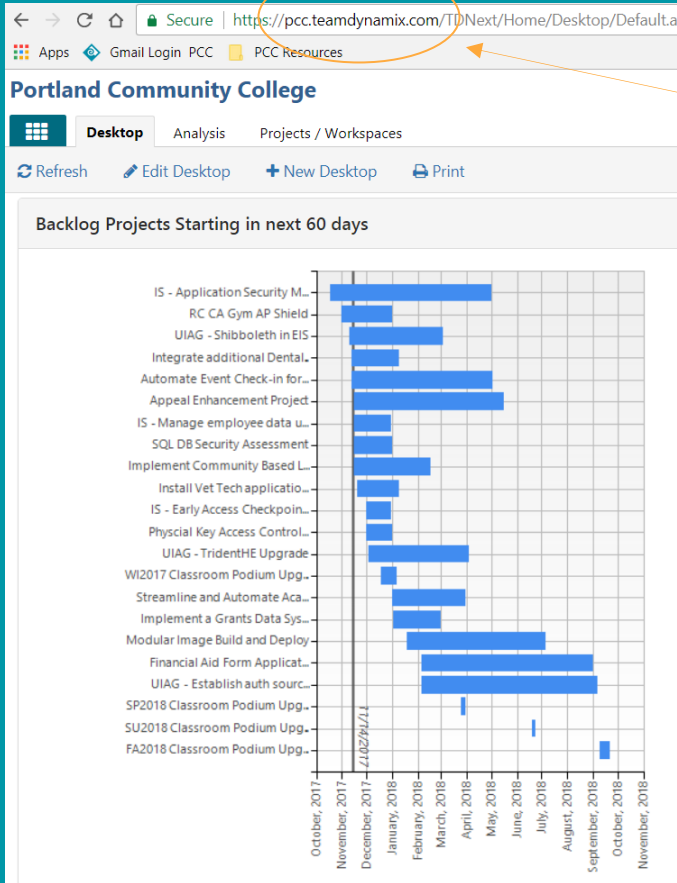


# PMO: 2016-2017



Portfolio Manager & Enterprise Architect working to develop strategic IT Governance framework

# PMO is meeting Client Expectations by...



## Managing the IT portfolio

Portfolio of projects maintained and visible on [IT PMO Spaces](#) and [TeamDynamix](#) via Single-Sign-On (SSO). Intake and Prioritization process on a 4 week cycle with 20+ cross-discipline stakeholder participants.



## Providing a single source of truth for IT projects

All active and backlogged projects in a single software platform. Project portfolio communication across various venues. Most recent project status, issues & risks visible to stakeholders.



## Becoming PCC's authority on Project Management

Baseline standards, processes, and framework established for IT project management. Continuous improvement of standards, processes and framework through client and staff feedback.



## Establishing a culture of transparency & project delivery

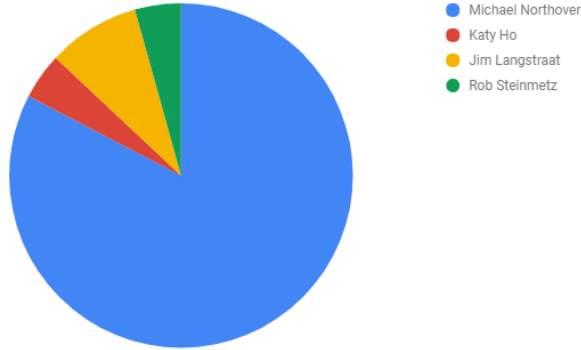
Championing a performance-focused project environment. Developing project management discipline and professionalism at the organizational level.



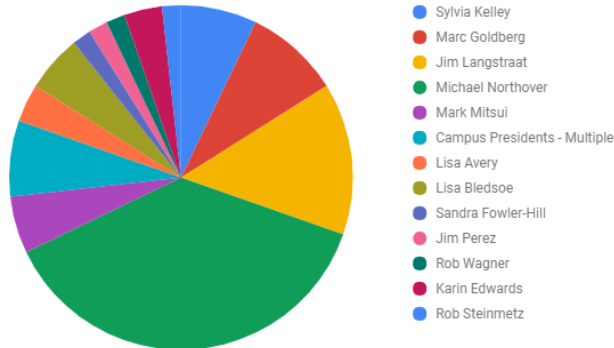
# Project Dashboard

## Portfolio Maturity

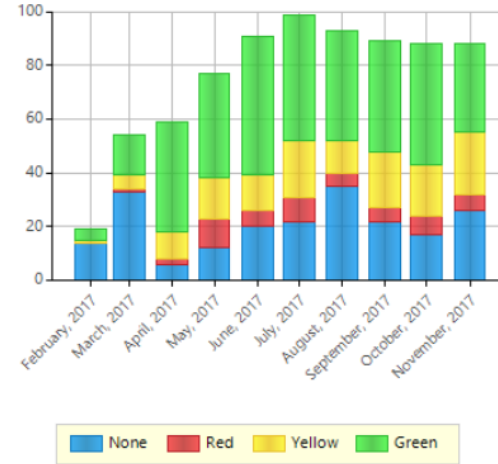
Count of Project Sponsor before June 1, 2017



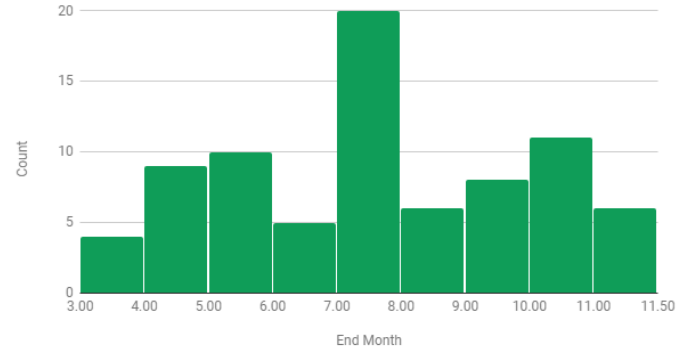
Count of Project Sponsor after June 1, 2017



## Historical Active Projects by Health



## Projects Closed per Month



Number of Projects closed 2017 to date: 79  
Average Number of Projects Closed per month 2017: 9

# Key Current Initiatives

## Mission Critical

- Banner9 Upgrade
- Identity Management
- Public Safety Upgrades (partnership with Public Safety)

## Strategic

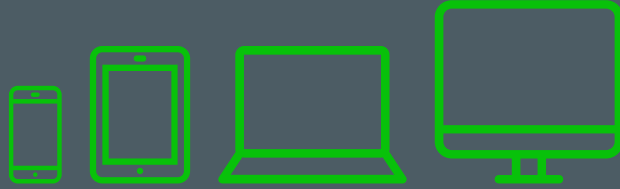
- Equitable Student Success Web Projects
- ERP Assessment
- YESS & SEM Engagement

## Operations/Infrastructure

- F5 and Application Firewalls
- Server Zone Migration & MicroSegmentation
- Apple Management
- District Imaging
- Managed Print Services (partnership with Auxiliary Services)

## Information Security

- Splunk/SIEM
- Data at Rest



# Questions?

Michael Northover, CIO

# Appendix: IT Strategy Additional Slides

Enable Student Success  
Optimize Enterprise Architecture  
Secure the Institution  
Deliver Operational Excellence  
5 Steps Launch Process



# Enable Student Success

Support opportunity & equitable student success through technology

## Align IT to academic plan

- ✓ Be responsive to Faculty needs
- ✓ Leverage governance and committees to synch goals and plans
- ✓ Establish PMO for prioritization and stakeholder visibility
- ✓ Partner on instructional technology, distance learning and non-credit
- ✓ Ensure ERP systems meet the current and future needs of the college

## Be educational futurists

- ✓ Create a digital strategy for PCC
- ✓ Be strategic advisers to college leadership Research, promote and adopt forward looking IT strategies
- ✓ Collaborate with faculty to align IT capabilities with curricula strategies

## Improve student experience

- ✓ Implement HR solutions to retain great faculty
- ✓ Strive for zero disruption of student experience
- ✓ Support the student lifecycle through IT
- ✓ Leverage technology to address onboarding and wayfinding challenges
- ✓ Be device agnostic and mobile first
- ✓ Leverage ASPCC, customer surveys and student feedback to improve services



*"We need technology in every classroom and in every student's and teacher's hand, because it is the pen and paper of our time, and it is the lens through we experience much of our world."*

David Warlick, educator, author, programmer

## Support data-driven decisions

- ✓ Leverage data science to support learning analytics
- ✓ Evolve from descriptive data to prescriptive data
- ✓ Create an enterprise BI platform strategy
- ✓ Support KPIs for student life cycle that drive student success
- ✓ Partner with Institutional Effectiveness

## Leverage technology to support those most in need

- ✓ Partner with ASPCC and Student Services to help underserved students
- ✓ Support Open Educational Resources
- ✓ Partner with Disability Services on Accessibility excellence
- ✓ Free software through vendor contracts
- ✓ Provide internships and work-study opportunities

## Some Key Initiatives

- ✓ Accessibility Compliance
- ✓ Learning Analytics & Data Science
- ✓ Student Information Systems (SIS)



# Optimize Enterprise Architecture

Apply rigorous methodology to major design decisions and investments

## Adopt an EA methodology

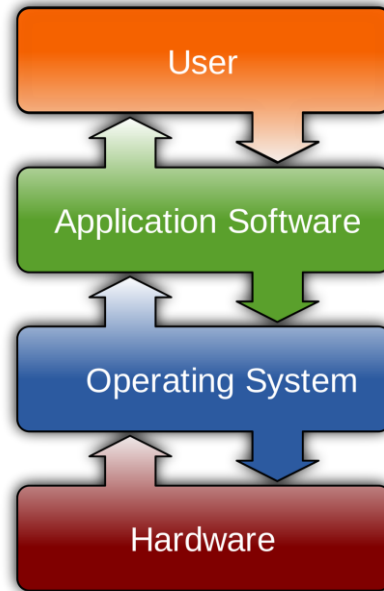
- ✓ Adopt TOGAF as a standard
- ✓ Assign and develop personnel
- ✓ Create architecture principles for PCC
- ✓ Develop standard artifacts and repository
- ✓ Select and implement software toolset(s)

## Make sustainable technology choices

- ✓ Eliminate redundancy and keep current
- ✓ Leverage technology to manage institutional power consumption
- ✓ Research new technologies and use sustainability as part of ROI evaluations
- ✓ Reduce customization of applications

## Identify stakeholder needs & strategies

- ✓ Align IT planning to President's Workplan, Academic Plan and Facilities Plan
- ✓ Define the supported set of technology
- ✓ Identify top priorities for strategic analysis and remediation.
- ✓ Create optimal IT Governance process
- ✓ Align IT investment to strategic goals



## Complete Current/Future State Gap Analysis

- ✓ Identify architecture domains for analysis
- ✓ Develop intersectional user stories for equity gap analysis
- ✓ Develop gap analysis for Business, Application, Data and Infrastructure architectures
- ✓ Ensure alignment with strategic plans
- ✓ Gain consensus with stakeholders and Governance

## Develop & sustain an IT RoadMap

- ✓ Create strategic roadmap
- ✓ Fund, intake and prioritize
- ✓ Rationalize, consolidate & retire
- ✓ Iteratively assess with stakeholders Publish, govern and report

## Some Key Initiatives

- ✓ Unified Identity & Access Governance
- ✓ ATD & Guided Pathways
- ✓ ERP Strategy & Disaster Recovery

# Secure the Institution

Protect our faculty, staff and students &  
ensure regulatory compliance

## Execute on 2016 InfoSec Program

- ✓ Maintain forward momentum as #1 priority
- ✓ Focus on highest risk/value initiatives
- ✓ Align budget to key investments
- ✓ Give quarterly Board updates
- ✓ Hold annual InfoSec offsite

## Establish policy, governance & controls

- ✓ Make InfoSec principles primary drivers
- ✓ Maintain cabinet approved policies
- ✓ Ensure cyber insurance coverage
- ✓ Institute control monitoring and review
- ✓ Conduct an annual NIST audit

## Maintain operational vigilance

- ✓ Execute ongoing operational, forensic and remediation activities
- ✓ Complete required Penetration and Vulnerability testing/remediation
- ✓ Train staff in technologies and behaviors
- ✓ Participate in conferences and seminars and collaborate with NW colleges
- ✓ Maintain relationships with Federal and State agencies and specialists
- ✓ Define metrics for measuring success and making data informed decisions



## Promote College Awareness

- ✓ Create targeted policy and best practice campaigns for faculty, staff and students
- ✓ Provide meaningful reporting to the President and Board of Directors including Annual Report
- ✓ Engage President, Board of Directors and Cabinet on key threats and strategies
- ✓ Leverage "Cyber Security Awareness Month"

## Be Compliant

- ✓ Hire a CISO to provide compliance, audit and control oversight
- ✓ GLBA, HIPAA, FERPA, HEA, PCI
- ✓ Ensure best legal and regulatory guidance
- ✓ Maintain compliant infrastructure (Firewalls, SOE, SOD, etc.)
- ✓ Maintain compliant operations (e.g. Patch Management, Cyber Analytics, etc.)

## Some Key Initiatives

- ✓ Regulatory Compliance
- ✓ Security Information & Event Management
- ✓ Encryption

# Deliver Operational Excellence

Embody industry best practices & be a preferred workplace

## Organize for success

- ✓ Ensure functional alignment & dismantle false boundaries
- ✓ Make training a priority
- ✓ Strengthen management practices
- ✓ Institute a PMO
- ✓ Improve documentation

## Be a data informed operation

- ✓ Define and collect KPIs
- ✓ Audit controls
- ✓ Create actionable MIS reports
- ✓ Measure staffing/productivity
- ✓ Leverage asset management systems
- ✓ Create accessible dashboards

## Own a culture of sustainability

- ✓ Strive for continuous quality improvement
- ✓ Make consumption core to purchasing
- ✓ Innovate to manage energy consumption
- ✓ Automate classroom configurations
- ✓ Maintain district wide consistency in standards, documentation and processes



## Provide best in class services

- ✓ Create a Service Catalog with manageable and sustainable SLAs
- ✓ Align internal IT operations with industry best practices (ITIL/ITSM)
- ✓ Leverage technology to maximize operational productivity
- ✓ Make training, communication and change management a priority

## Be a model for DEI

- ✓ Partner with Disability Services to make Accessibility a reality
- ✓ Apply Enterprise Architecture to IT Unit Change
- ✓ Send all classified staff to Social Justice workshop
- ✓ Promote a culture of respect, cooperation and opportunity
- ✓ Lead by example

## Some Key Initiatives

- ✓ Portfolio Management
- ✓ Service Catalog & Knowledge Base
- ✓ Task Automation & Remote Support

# 5 Steps Launch Process

Ready, Set... Go!

