Agenda

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

Appendix: IT Strategy Additional Slides
IT Strategy
Our Vision

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

PCC Strategic Goals

IT Strategic Goals

IT Strategies

Program A
- Project A.1
- Project A.2
- Project A.3

Program B
- Project B.1
- Project B.2
- Project B.3

Program C
- Project C.1
- Project C.2
- Project C.3

President's Work Plan
- Facilities Plan
- Academic Plan
- Accreditation

IT Strategic Portfolio
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)
- Not Started
- In Progress
- Done/Ongoing

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)
- Not Started
- In Progress
- Done/Ongoing

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
- Not Started
- In Progress
- Done/Ongoing

Data
- "Data at Rest" Strategy
- "ED to AD" & SHA-2 Password Encryption
- Virtru 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.)

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

Cyber Team

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

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Gartner InfoSec Maturity Score

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

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

2016
...is 3.1 and your role for All: 2.9...

2017
...is 3.8 and your role for All: 2.9...
Portfolio Management
PMO: 2016-2017

- IT Governance
- Single Sign On
- Engage Stakeholders “Intake & Prioritization Committee”
- IT Procedures & Training
- Implement Platform (TeamDynamix)
- Establish PMO

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

Historical Active Projects by Health

Projects Closed per Month

Number of Projects closed 2017 to date: 79
Average Numer 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 sync 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

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)

“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
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!

Technology
Lay the foundation
Architect and deploy the most effective, sustainable and forward looking enterprise solutions

People
Organize for success
Give our staff the tools and training to be more productive and advance their careers

Strategy
Align to college goals
Stay attuned to college needs and strategies to ensure future state technology solutions meet college goals

Process
Plan & govern
Adopt IT Industry best practices for managing, operating and controlling the enterprise

Success
Launch to the future!
Celebrate success, don't be afraid to fail, make IT a strategic partner to the college leadership