

# ITS Executive Steering Committee (ITESC)

Agenda and Materials – October 01, 2019



# Agenda

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## ITS Prioritized Projects Review

- S. Malisch, B. Montes, J. Sibenaller, D. Vonder Heide

## Loyola Digital Experience Foundation: Collaboration & Security

- J. Sibenaller, D. Vonder Heide

## Information Security Improvements

- J. Sibenaller

## Data Backups

- D. Vonder Heide

## HSC Applications

- S. Malisch, J. Sibenaller

# ITS Prioritized Projects Review

Rank	Project	Technology	Phase	Rank	Project	Technology	Phase
1	LDE Foundation: Collaboration & Security	Enterprise/ Multiple	Live/Build	15	Writing Placement Infrastructure	PeopleSoft	Testing
2	Sakai 12 Upgrade	Sakai	Live	16	Emergency Contact in RMS/Mercury using Person Flags	RMS/Mercury	Testing
3	Modifications for Collective Bargaining Agreement	Faculty Info System	Build	17	Board of Trustees SharePoint Portal	MS SharePoint	Live
4	Course Evaluation Replacement	SmartEvals	RFP Review	18	Career Services Software Replacement	Handshake	Live
5	Space and Asset Management System - Phase I	JLL-Archibus	Requirements	19	JIT Faculty Training for Online Teaching	Custom	Live
6	Course Schedule Builder/Student Success	EAB-Navigate	Kick-Off	20	Follett Integration with Sakai	Sakai	Deployment
7	LOCUS Fluid	PeopleSoft	Requirements	21	Mac OS Computer Management Application	JAMF	Live
8	Secure Submission of W9 Forms	Custom/Lawson	Live	22	LDE Transformation - Digital Assistant Pilot	Intrasee	Pilot
9	Proto-call After Hours Mental Health Services	Proto-Call	Live	23	Travel & Expense Management Technology Solution	TBD	RFP Review
10	Preferred Names/Pronouns	Enterprise /Multiple	Live/Analysis	24	Benefit Plan Termination Date Modification	Infor/Lawson	Build
11	Student Conduct & Concerns (incl Faculty/staff)	Maxient	Live	25	Student Mentoring Pilot	PeopleGrove	Build
12	Learning Portfolio Review	TBD	RFP Review	26	OIP Center Replacement	Terra Dotta	Build
13	Replacement of ECSI SALNet	TBD	Analysis	27	CVENT Support for Climate Change Conference	CVENT	Deferred
14a	ISIR Data for Verification via Inceptia	Inceptia	Pending	--	New Benefits Vendor – Aetna vs Blue Cross	Infor/Lawson	Build
14b	Oracle Student Financial Planning Module	Oracle SFP	Deferred	--	BI Dashboards	MS Power BI	Build

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# LDE Foundation-Program Summary

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## Overall Health

- **Lime** – minor delays, minor risks
  - **MFA** – Pilot results caused re-configuration and additional unplanned testing
  - **LastPass** – Initial configuration of Single Sign-On component was problematic
  - **Data Loss Prevention** – Taking a more conservative approach to validate policy impacts on documents
  - **Advanced Information Protection** – Configuration issue with the Vendor

## Program Manager Change

- Heather Chester assumed the role on 9/16

# LDE Foundation-Program Phases

Description	Phase	Timing	Product	Type
Cloud email	Live	FY20 Q1	Exchange Online	Opportunity
Multi-factor authentication tool	Pilot	FY20 Q4	Azure Multi-Factor Authentication and Conditional Access	Roadmap
Password manager/repository	Pilot	FY20 Q2	LastPass	Add-On
Data monitoring and loss prevention	Pilot	FY20 Q3	Azure Data Loss Prevention	Roadmap
Classify and label documents (need for data loss execution)	Testing	FY20 Q3	Azure Information Protection	Roadmap
Password self-service (replaces React)	Pending	FY20 Q4	Azure Password Self-service	Add-On
Mobile device management tool	Analysis	FY20 Q4	Intune (Mobile Device Management)	Roadmap
Privileged & powerful access management	Pending	FY20 Q4	Azure Privileged Identity Management	Roadmap
Email spam/security filtering (replaces Proofpoint)	Pending	FY21 Q1	Exchange Online Protection and Advanced Threat Protection	Opportunity
Landing page for faculty staff including single sign-on	Research	FY21 Q2	O365 Application Portal (single sign-on)	Opportunity

# LDE Foundation Program Timeline



## Loyola Digital Experience - Foundation Timeline - 09/30/2019

	2018			2019												2020																		
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC							
Azure Multi-Factor Authentication and Conditional Access POC				planning					pilot																									
Azure Multi-Factor Authentication and Conditional Access Rollout									phased deployment																									
LastPass Password Management				planning			pilot					deploy																						
Azure Information Protection and Azure Data Loss Prevention POC				planning					pilot																									
Azure Information Protection and Azure Data Loss Prevention Rollout														deployment																				
Azure Password Self-service														planning		pilot		deployment			parallel operations													
Intune (Mobile Device Management)														Policy Review		planning			pilot		deployment													
Azure Privileged Identity Management														planning		pilot		deployment																
Exchange Online Protection and Advanced Threat Protection (email gateway)																	planning			deployment														
O365 Application Portal (single sign-on)																	planning			pilot		deployment												
Exchange Online (POC) - COMPLETE	COMPLETE																																	
Exchange Online Migration - COMPLETE							COMPLETE																											

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# Information Security Program Components

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Governance

Cyber Threat  
Protection

Awareness, Education  
& Training

Data Identification,  
Analysis & Forensics

Policies, Procedures  
& Guidelines

Vulnerability  
Assessments

Audit, Compliance &  
Regulations

Secure Access

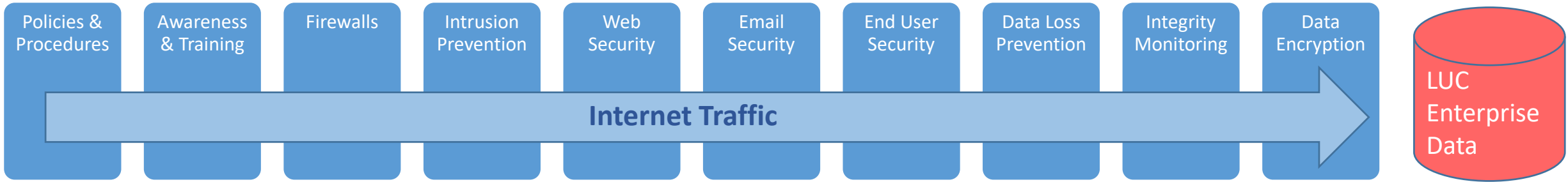
Incident Response

Risk Assessment  
Program

Security Operations  
Center

ERP Security Services

# Cyber Threat Protection – End of FY18



## Layered Security – Levels 1-5

### Policy & Procedures

- Published, reviewed annually, governed by ISAC, cyber insurance

### Awareness & Training

- Online sessions, social media, web site, videos, phish publishing

### Firewalls

- Palo Alto Next Generation Firewall

### Intrusion Prevention

- Palo Alto Next Generation Firewall, Global Protect

### Web Security

- F5 Load Balancer, F5 Web Application Firewall

## Layered Security – Levels 6-10

### Email Security

- ProofPoint, MS Junk Filtering

### End User Security

- MS Defender, Bradford NAC, Global Protect VPN

### Data Loss Prevention

- Identify Finder (at rest data)

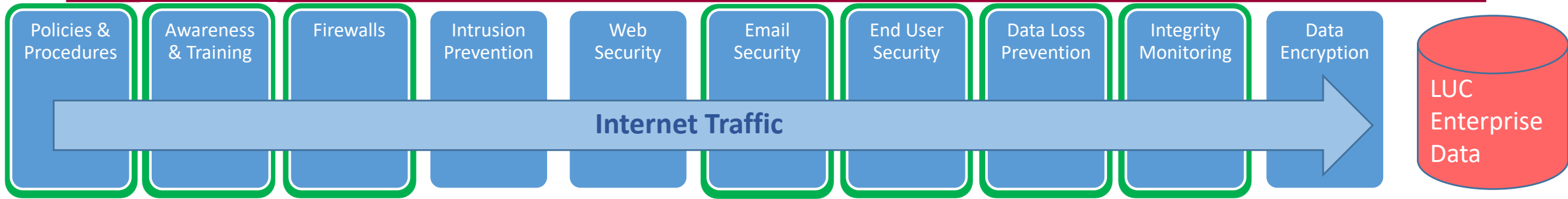
### Integrity Monitoring

- IBM AppScan (web application), Logrhythm (SIEM), CimTrak (PCI file integrity), Trustwave (external scanning)

### Data Encryption

- MS Bitlocker, Oracle native encryption

# Cyber Threat Protection – FY19-FY20



## Layered Security – Levels 1-5

### Policy & Procedures

- Published, reviewed annually, governed by ISAC, cyber insurance, [secure how-to instructions](#)

### Awareness & Training

- Online sessions, social media, web site, videos, phish publishing, [Phinn](#), [SecurityIQ](#)

### Firewalls

- Palo Alto Next Generation Firewall ([switch to application based permissions](#))

### Intrusion Prevention

- Palo Alto Next Generation Firewall, Global Protect,

### Web Security

- F5 Load Balancer, F5 Web Application Firewall

## Layered Security – Levels 6-10

### Email Security

- ~~ProofPoint~~, MS Junk Filtering, [Exchange Online Protection](#) and [Advanced Threat Protection](#)

### End User Security

- MS Defender, Bradford NAC, Global Protect VPN, [Multi-Factor Authentication](#), [LastPass Password Vault](#), [Privileged Identity Mgmt](#), [Intune Mobile Device Mgmt](#)

### Data Loss Prevention

- Identify Finder (at rest data), [MS DLP](#) and [Azure Information Protection \(data in motion\)](#)

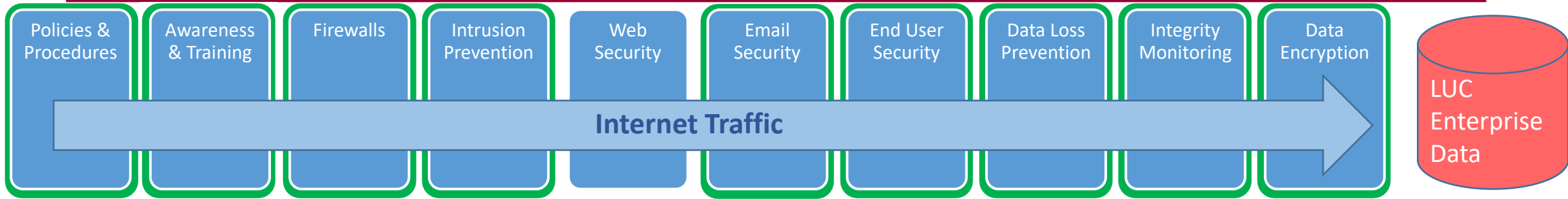
### Integrity Monitoring

- IBM AppScan (web application), Logrhythm (SIEM), CimTrak (PCI file integrity), Trustwave (external scanning), [Nessus \(internal scanning\)](#)

### Data Encryption

- MS Bitlocker, Oracle native encryption

# Cyber Threat Protection – FY20-FY21



## Layered Security – Levels 1-5

### Policy & Procedures

- Published, reviewed annually, governed by ISAC, cyber insurance, secure how-to instructions, 3<sup>rd</sup> party info. security program assessment

### Awareness & Training

- Online sessions, social media, web site, videos, phish publishing, Phinn, SecurityIQ

### Firewalls

- Palo Alto Next Generation Firewall (switch to application based permissions), data center firewalls

### Intrusion Prevention

- Palo Alto Next Generation Firewall, Global Protect, mobile threat protection

### Web Security

- F5 Load Balancer, F5 Web Application Firewall

## Layered Security – Levels 6-10

### Email Security

- ~~ProofPoint~~, MS Junk Filtering, Exchange Online Protection and Advanced Threat Protection

### End User Security

- MS Defender, Bradford NAC, Global Protect VPN, Multi-Factor Authentication, LastPass Password Vault, Privileged Identity Mgmt, Intune Mobile Device Mgmt, signatureless anti-malware

### Data Loss Prevention

- Identify Finder (at rest data), MS DLP and Azure Information Protection (data in motion)

### Integrity Monitoring

- IBM AppScan (web application), Logrhythm (SIEM), CimTrak (PCI file integrity), Trustwave (external scanning), Nessus (internal scanning), full penetration test

### Data Encryption

- MS Bitlocker, Oracle native encryption, Oracle data masking, point to point encryption

# Data Backups (Storage): Current State

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## Hardware

- Focused on applications and data (450 physical servers)
- 565 TB Capacity at both LSC and WTC
- Original purchase in 2004 (IBM)

## Software

- Proprietary (IBM Spectrum Protect)

## Data

- Hardware running at capacity
  - 565 TB per Campus (replicated)\*
  - Replicated Nightly
- Backup Retention
  - Production – 400 Days
  - Test/Dev – 90 Days



\* This does not include data backup for virtual servers. All inclusive is ~1.25 PB (petabytes)

# Data Backups (Storage): Limitations

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## Backup Performance

- 45 minutes to 4 hours per server
- Approximately 15 hours/day



## Disaster Recovery Replication (to opposite campus)

- 20+ hours/day

## Tape Limitations

- De-Duplication and Compression Limitations

## Additional Concerns

- Replace Legacy Hardware
- Maintenance (Replacement parts availability)
- Cannot Accommodate High Capacity Drives/Tapes

# Data Backups (Storage): Recommendation

## Technology Advisory Committee Activities

- Vendor analysis
- Gartner review
- Revise retention policies
  - Production – 100 Days
  - Test/Dev – 40 Days
- Talk with peer institutions

## Recommendation

- Dell / EMC
  - Market leader
  - Integrates with cloud storage
  - Vendor agnostic (non-proprietary)

## Capital / Operating (Maintenance)

- \$514,408 (includes 3 years maintenance; funded by \$520K placeholder in FY19)
- \$48,312 (current maintenance on legacy hardware, temporarily reallocated to offset forecasted increases)
- \$52,665 (commences in FY23)



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# HSC Application Mapping



# 2019 ITESC Schedule

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## **February 27, 2019 - Tuesday, 1:00-3:00 PM**

- Integrated Workplace Management System
- Loyola Digital Experience/Email in the Cloud Pilot Results
- Key Upcoming Technology Changes

## **April 30, 2019 - Tuesday, 1:00-3:00 PM**

- Space & Asset Management System - Archibus
- Academic Technology Committee
- Information Security Advisory Council
- Architecture Review Board/Loyola Digital Experience
- ITS Project Portfolio Preparation

## **June 20, 2019 - Thursday, 1:00-3:00 PM**

- Project Portfolio Prioritization

## **August 21, 2019 – Wednesday, Email Briefing**

- FY20 Q1-Q2 Portfolio Prioritization Results
- Technology Support for Faculty Teaching This Fall
- Major Initiatives Contract Summary Status
- Additional Highlights

## **October 1, 2019 - Tuesday, 1:00-3:00 PM**

- ITS Prioritized Projects Review
- Loyola Digital Experience Foundation: Collaboration & Security
- Information Security Improvements
- Data Backups
- HSC Applications

## **December 12, 2019 - Thursday, 1:00-3:00 PM**

- PeopleSoft Fluid Demo
- Project Portfolio Prioritization