BUCKNELL UNIVERSITY

Building a One Card system…
from Scratch

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7000 Cards…
300 Doors…
48 Buildings…
8 Months!!!
About Bucknell

- Bucknell is the largest liberal arts university in the United States
- 3400 Undergraduate & 200 graduate students
- 1700 Faculty & staff members
- Students from 46 states, 58 countries
- 27% selectivity rate (most selective)
- Campus is 650 acres
- 130+ buildings
Purpose & Objectives

- Discuss catalysts for the increases to awareness and spending security on campus
- How to begin a comprehensive security project
- Service vs. Security
- Marketing
- Technology Leveraging & other considerations
- Lessons Learned
The Catalysts

Salient Events that have increased awareness and spending

- Jean Clery 1986; subsequently the Clery Act
- September 11th 2001
- Pandemic Planning 2006
- April 16th 2007 & Valentines' Day 2008
  - Virginia Tech & NIU
Size & Scope

• Number of Buildings
  – 48 building (Phase 1)
  – 80 additional (subsequent phases)

• Number of Doors
  – 285 doors

• Wiring for laundry (pre-planning)
  – 33 readers

• Type of Doors
  – Access controlled v. Delayed Egress

• Scope Creep
  – Who has input should be established ahead of time
Usage

• On and off campus; or just one
  – What currently exists
  – How will it integrate
  – What's the timeframe for usage expansion
  – What are the Benefits

• Stakeholders & Buy-in
  – Students, Faculty, Staff, Trustees, Alumni
  – Dining & Vending; on campus
  – Off campus merchants
  – Financial Institutions
Budgeting

• Where are the funds coming from

• Quasi-endowment Budget
  – May require trustee level approval

• Multi-phased

• Capital Budget requests

• Multi-Yeared
Bid vs. Design-Build

• Design-Build
  – saves time
  – streamlines process
  – Issue/problem ownership

• Bid
  – Allows tighter pricing

• Questions
  – Trust & relationship
  – Availability of resources in the area (GC, EC’s)
  – Industry Recognized Company
New v. Old Construction

- Existing standards v. creation of new standards
  - Who decides what works and what doesn’t

- Existing system v. new install
  - Can there be integration
  - What are the cost associated with integration

- Compatibility
  - Legacy systems (technology)
  - Dining Services / Systems CSGOLD
  - Copier system
Integration

• Backend
  – Security, residential, finance

• Existing systems (Cbord, Blackbord, Software House)
  – Laundry
  – Dining
  – Vending
  – Cameras
  – Data migration
  – Data linkage
  – Allowable customization (or vendor creation only)
  – Data Synchronization
Technology

• What do you have and what do you need
  – Magstripe…Proximity…iClass…fobs…iButtons
  – Range for each system
  – Wired or Wireless

• How will you attach to building
  – Casing
  – Recessed, cover, box
  – What is the effect of recessed readers?
  – ADA bollards

• Do you have a One Card System
  – Will the upgrades be integrated into the system
  – Does the Manager understand how it will effect
  – Purposes (security or convenience)
Information & Data

• What should you have ready to begin the project
  – Building schematics/way finding/drawings/as-builts
  – What format are they in
  – Wiring structure (line runs)
  – Entity relationship diagrams

• Is your data standard and uniform
  – Campus infrastructure (util/underground/capacities…)
  – Long-term campus master plans
  – Special considerations
  – Brown space/remediation information
Consultant choice

• The most important decision you will make!!!

• Questions to ask
  – Are you staffed to handle
  – Do you have the experience
  – DO YOU HAVE THE TIME…this is a full time job for our size project

• Will your Construction Department be providing personnel
  – Are they staffed to handle the project
  – Do you have the experience & understanding
  – Do they understand what is driving the process
Doors Types & Hardware

• Interior
• Exterior
• Double doors
• Historic considerations
• Code Requirements
• Fire doors
• Audible v. non-audible alarms
• Glass
• Automated (ezpass)
  – ADA Compliance
  – Religious Consideration
• Maglock v. Electric Strike
Windows

• Are they included in your assessment
  – All first floors access points

• How do you protect them
  – Bars
  – Screens
  – Transparent Film - 3m Ultrafilm to prevent sharding

• What are the costs associated
  – ~ $500 per window
Network

• Is your network prepared for the upgrade
  – What type will it use
    • TCP/IP
    • Fiber
    • Copper
  – Redundancy

• Capacity (other institutions)
  – Current
  – Expected
  – Available

• Projections (usage/growth)
  – All usage and security upgrades
Construction Administration

- Who is responsible
  - Is it requested in your original proposal
    - Will affect bidding heavily

- Who oversees and processes
  - Change orders
  - System sign-off for implementation
  - Warranty admin

- If not the consultant can your institution handle the workload and oversight???
Card Office Creation

- Migration of functionality and production
  - Registrar to Card Office
  - Card Office Location – Choose a **CENTRAL** location
  - Room design & lighting considerations
  - Outsource existing staff and student ID cards

- Policies and Procedures
  - Data migration
  - Card production and design
  - Laminating
  - Security processes

- Data migration
  - Moving current data to new system
  - Integrate with Banner and CSGold
Card production

- Type (plastic v. composite)
- In-house v. Outsourcing
- Printer type & functionality
  - 1 v. 2 sided
  - Thermal v. non
  - Laminating
  - Security film
- Batch production for first run
- Card layout & coloring – preproduction testing
- Creation failure rates (5%-10%)
- Testing (after production)
Schedule

- Overall timeframe (expected v. actual)
- Length & scope of project
- Time of year
- Breaks
- Study/quiet hours
- Daily work schedule (not 7am…)
- Conferences & events
Standards Document Creation

- Develop Standards documents
- Obtain Presidential sign-off
- Document should outline
  - Required inclusion mandatory for all construction new and retrofit from then on
  - Inclusion at *beginning* of all project Current, Future Retrofit construction
  - Cabling standards & runs
  - What if anything can be modified
    - Required v. planned growth
Maintenance

- Who owns it … and what are the boundaries
  - Facilities
  - Lock-shop
  - Public Safety

- Security Integrator
  - Warranty work

- Problem identification
  - Response time
  - Who’s job

- Preventative Maintenance Budget
  - On hand stock
Lessons Learned

• Think about door names & coding prior to installation
• Honest assessment of buildings and required doors
• Be careful of metal
• Be aware of fob and card ranges
• Be aware of iButton limitations
• Recessed readers
• Covers on readers
Other Considerations

- Marketing
  - Student
  - Faculty & Staff

- Handbook Creation & Modification
  - Student
  - Faculty & Staff
  - New v. existing

- Policy & Procedure Manual
  - Who owns
  - Who maintains

- Card Distribution
  - Team Approach
Summary

• These projects are large and overarching
• Hire & maintain a good consulting company
• Create a relationship with your integrator
• Chose a backend that can run new and existing systems across multiple platforms
• Make sure you have buy in from the top
Questions?

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