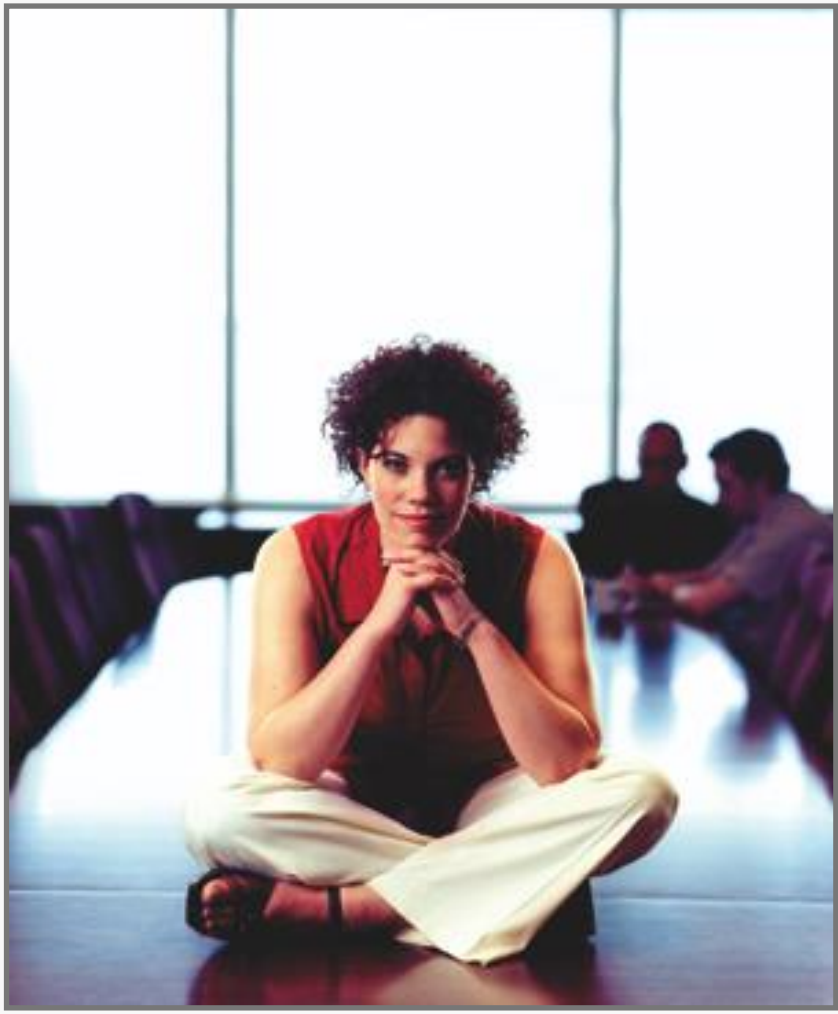
90 Day Assessment

Information Technology Services

September 9, 2016

Purpose

- **Objective**
- **Approach to 1st 90 days**
- **Observations on**
  - People / Culture
  - Process
  - Technology
  - Partners
- **Risks**
- **So… what are we going to do?**



Objective

- To share my insights after 90 days with NSCC from the perspective of our people and culture, how we work (processes), the technologies we manage and the partners we rely on
- To share my preliminary thoughts around how we will move the IT department forward so it can become more mature, more efficient and better equipped to deliver on the technology needs of the college

My Approach to the 1st 90 days

- **Priority #1 – Establishing positive and open culture based on open and frequent communication**
  - The 2015 Employee Engagement survey showed low scores on “I receive relevant communications about things that impact my work”
  - Established the “Weekly Update” which has been well received. Intend to transition this to the web (blog) so it can be viewed by others at the college
  - Initiated one-time 1:1 meetings with all staff in my department to meet everyone face to face to learn about their families, interests and thoughts on our work
- **Priority #2 – Understanding the culture of the college**
  - Recognizing that we’re big but maintaining the desire to continue working like we’re small
  - Seeking equilibrium between corporate initiatives / consistency and campus uniqueness / independence
  - Navigating the different sub-cultures associated with the Administrative (risk aversion), the Academic (collegial sometimes to their peril) and Research & Innovation (risk taking)

My Approach to the 1st 90 days

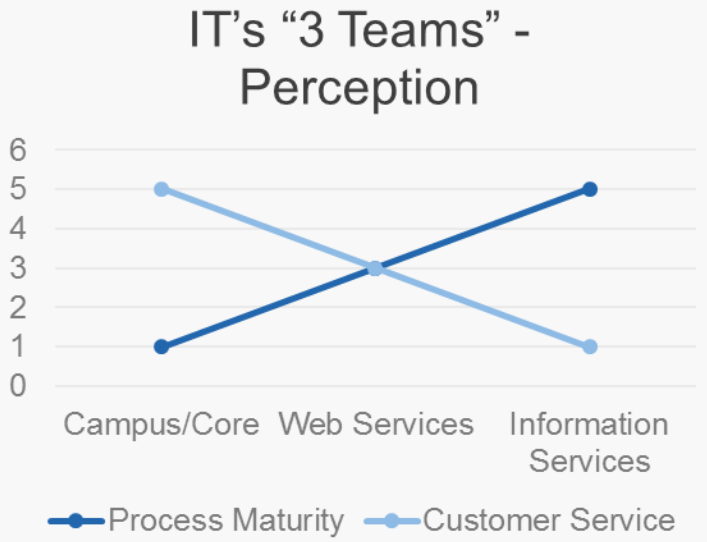
- **Priority #3 – Listening and Learning**
  - My direct reports did not get the face time, guidance and support required from my predecessor. Established weekly 1:1 meetings and have shown genuine interest, asked *many* questions and have tried to help
  - Initiated campus and site visits around the province with only Cape Breton remaining (scheduled for mid-September)
  - Met with college colleagues: Foundation, Marketing & Communications, Integrated Planning, Recruitment & Admissions, Financial Services, Human Resources, NSCC International, Library & Information Services, Organizational Learning, Student Services, Applied Research & Innovation, Dean, IT & Creative Industries
  - Conference trip to CANHEIT in June was great – accelerated my Higher Ed learning curve
- **Priority #4 – Understanding the services we currently deliver and how we deliver them**
  - Beginning to paint a picture of our current service delivery model (“matrix on top of matrix”)
  - *Initial*, strong reaction to the reality of no central IT Service Desk. Decentralized support/intake
  - Reviewing relevant/current process documentation
  - Engaging with key vendor partners to understand how well we are leveraging them

Observations: People & Culture

- The team is committed and reliable; no attendance issues and few/if any performance issues
- Everyone I've encountered, regardless of department, is proud to work here
- The college lacks a clearly defined Accountability Framework. The ultimate accountability for key business services and business processes is not well understood and as such is viewed as *shared*. This yields conflict over "ownership" and makes decisions hard to come by / hard to live with
- There is a lack of trust between departments that has grown in part because of the above and in part because of past delivery / project failures or the *perception* that service or project delivery hasn't met *their* requirements
- Intra organizational communication is poor. There is not a clear sense of what other departments are working on or have as priorities. There is a trend of *surprises* where a department is engaged at the last minute on an initiative or project that either requires their involvement or would have benefited from their involvement

Observations: People & Culture

- IT is comprised of 3 distinct teams which are not well/tightly integrated
- The campus / core operations team views themselves as those that bend over backwards for the customer. Their colleagues sometimes view them as “cowboys”
- The Information Services team views themselves as high functioning, highly structured and process-oriented. Their colleagues sometimes view them as the “department of no”



- The Web Services team views themselves as creative and more technically capable than their peers in IT give them credit for. In some areas they view themselves as *more creative* than Marketing & Communications
- The goal will be in working to create a unified team with a common culture that brings balance to the process vs. customer service equation

Observations: Process

- Intake into IT is not standardized
  - For day-to-day campus operational issues, campus techs are engaged directly
  - For core services related issues, campus techs are sometimes engaged, in some cases customers go directly to core services staff, in some cases the IT Manager is engaged
  - Web services receives tickets via the Help Desk self-service tool but also receives calls or emails directly to the manager or team members
  - Information Services receives tickets via the Help Desk self-service tool but also receives calls or emails directly to the manager or team members
- This is less than ideal for a variety of reasons:
  1. It creates a barrier for customers to get the help they need until they learn where to go for what. If they move to another campus, they need to "re-learn" certain aspects of IT Support.
  2. It makes it difficult for IT to consistently prioritize new work
  3. In many cases, service will be provided and no ticket will be logged which yields inaccurate reporting. This impacts our ability to forecast resource requirements and to identify systemic trends that we should move to eliminate entirely
  4. There is often confusion for the student regarding whether they should go to IT, Student Services or the Business Office; often where they start is not where they end up

Observations: Process

- Overall IT Process maturity is low
  - Key IT Service Management processes are undefined
    - How do we fix something when it breaks? (categorizing, prioritizing, communicating status, recording resolution activities)
    - How do we manage new requests for service?
    - How do we manage making changes to our production environments?
    - How quickly should we work to restore service when it fails or provision new requests?
    - How do we manage the information about IT assets and their complex configurations?
    - How do we consistently manage the relationships and contracts with our external suppliers?
    - And more…
  - Project Management processes are partially defined but not executed consistently
    - PMs have latitude around how they manage their projects
    - Issues and Risks are not well identified and managed
    - Status reporting is not consistent
    - Project governance (steering) could be more standardized
    - There is a lack of understanding of what constitutes a project management methodology. Often confused with “templates”

Observations: Process

- Overall IT Process maturity is low
  - Portfolio Management processes are adhoc and not sophisticated enough to meet the college's objectives
    - They don't extend beyond Information Services. They should encompass all IT projects
    - Historically project resources have been allocated to projects to serve a particular department at a time or with a FIFO mindset
    - There needs to be better recognition of the need to "balance" the IT project portfolio with "keep the lights on", grow/enhance and transformational projects. You can't allocate all of your resources to the sexy stuff or ignore the mundane but necessary
    - Investments need to be made in IT planning processes – how do we consistently "triage" new project requests to gauge how they align with the college priorities, strategies and plans. How do we define the quantifiable and qualitative benefits of a proposed project?
    - How do we rank the top projects and decide which ones we run over a 3-5 year window?
  - Enterprise Architecture processes are undefined
    - A standards program needs to be developed (can streamline many aspects of IT delivery)
    - How do we decide "what goes where"; there are generally multiple ways any particular use case can be enabled and there are downstream ramifications associated with that decision
    - Solution architecture processes need to be defined; how do we design new solutions?

Observations: Technology

- Not a lot of legacy technology exists; largely due to investments in heavily discounted Microsoft technologies. Little “technical debt” to pay off
- Computing standards and device rationalization is a necessity. Do we really need 7,000 computers?
- We lack some of the “IT management technologies” required when operating at this scale (i.e. Microsoft System Center Configuration Manager). These tools can help us decrease risk and increase team efficiency
- The college has invested a lot of money in Smartboards that are underutilized and in many cases could be replaced with simpler, more cost effective solutions
- The Polycom system in place for video/audio conferencing is well architected and reliable (especially for teaching/learning use cases) but is expensive. A plan needs to be developed to optimize the use of these technologies now that Skype for Business is here
- The network is fast, reliable and the envy of other institutions but could be better leveraged

Observations: Technology

- A plan is needed to reconcile/optimize the use of decentralized campus infrastructure vs. NSCC data center vs. Bell hosting vs. cloud infrastructure as a service (Microsoft Azure). We have stuff scattered everywhere
- The telecommunications portfolio currently sits with Facilities. As discussed, this should transition to IT given the “unification” of computing and telecommunications technologies; mobile is a computing platform now
- The Analytics team has traditionally not been well integrated with the IT department; they are a customer of IT managed infrastructure but not a consistent partner in IT procurement or project delivery; A better understanding of how Microsoft’s Power BI service could be integrated into our landscape is required
- A better understanding of PeopleSoft’s cloud strategy and roadmap is required; unfortunately any cloud transition will be inhibited by the level of customization in the Student Information System
- Not all enterprise software licensing is managed by IT. Adobe is managed by the Dean of IT & Creative Industries. ESRI is managed by COGS

Observations: Partners

- Current contract with Bell (Aliant → Canada) is gargantuan in scope. Many eggs in one basket but moving forward, eggs will continue to be removed
  - Microsoft Office 365 transition (exchange servers decommissioned)
  - Cascade CMS SaaS offering (web could move here or to Microsoft Azure)
  - Future transition of PeopleSoft to a cloud offering / cloud alternative
  - Technical/DBA support services (could be insourced or delivered by another vendor)
  - Internet access (could be transitioned to a bulk buy via HISS)
- The management of our Wide Area Network is “core” and could remain and also be expanded if we or the collective (HISS) desired a broader model
- Relationship with Microsoft / softchoice seems to be of the “order taker” variety. Little strategic guidance being offered. Microsoft views us as “mid market” meaning we don’t have local resources helping us plan and adopt
- Relationship with PeopleSoft seems to be similar in nature
- Overall observation here is that the relationships with our vendors are primarily tactical and operational. We need to develop these into strategic relationships

Risks

- Information Security
  - 3rd Party Threat Risk Assessment not conducted since 2007 (should be done regularly)
  - Focus has been on the computing/network/server infrastructure but has not been integrated into Web or Information Services
  - Security Awareness Program is a must as the majority of Info Sec issues today are the direct result of human behavior, not technology gaps
- SARA fault tolerance
  - Current system designed in a decentralized manner, with server infrastructure at each site. The server infrastructure is not redundant and 3rd party support contracts are not well defined. This system needs to be available 99.999% of the time if it is viewed as life critical
- Managing Demand
  - There is clearly pent up demand for new/enhanced systems across the college (Org Learning, Libraries, Finance/Procurement, Student Services, Recruitment & Admissions)
  - Technology governance and portfolio management practices will help us surface “the right projects” for the college but relationships will still strain as we won’t be able to deliver everything
- IT Training
  - Value from technology is not derived from the implementation but adoption. Adoption comes through effective training / adult education. We need to improve here significantly

Risks

- Lack of managerial/leadership focus on key aspects of healthy IT service delivery
  - Management of “Core” or “Infrastructure” services
    - Staff don’t always know who to go to for what
    - IT managers challenged to focus given day-to-day campus responsibilities and relationships
  - Leadership of IT Service Management process enablement and continuous improvement
    - “We have lots of people building widgets but no one focused on how we build widgets or how well we build widgets”
  - Portfolio / Project Management leadership & focus
    - Best practice adoption and consistent execution
    - Hoping that with new Operations & Resource Manager, Pram will have more time to focus in on this area
    - Longer-term this may not make sense given that a healthy portfolio must include projects above and beyond Pram’s IS projects
  - Relationship Management
    - The IT Managers today play a key role in relationship management at the campus level; more time should be invested here but this is a challenge due to core services responsibility
    - No clear engagement model exists for managing relationships with CENTRAL departments

Risks

- ERP Customization
  - As previously mentioned, the Student Information System is heavily customized which will inhibit a transition to a multi-tenant cloud solution
  - Administrative ERP is closer to “vanilla” which could allow us to shift this to the cloud first
- No one person or department is accountable for the college’s information and data assets
  - Without proper data governance, the college’s analytics objectives may not be met due to ‘garbage in, garbage out’. Decisions will be made based on erroneous/inaccurate data
  - Without clear Information Management policies, processes, procedures and enabling technologies there are legislative (FOIPOP) and legal (discovery) risks. Retaining everything forever is not a good thing
  - With the full transition to a digital workplace, how our information is structured, classified and organized will be a critical success factor. Without governance and proper metadata (data about data) management, ‘search waste’ will continue

So… what are we going to do?

1. Build a single, integrated team without silos where subject matter expertise is recognized by all and the *right people* are engaged in the *right work* at the *right time*

2. Implement Just Enough Process (J.E.P.) in…
   - IT Service Management
   - Project Management
   - Enterprise Architecture

… over *multiple years*, with *significant staff involvement*, enabled by *modern tools*

3. Implement IT planning processes and technology governance that allows the college to perform the necessary due diligence to determine which IT projects are *the right projects* to allow NSCC to achieve its strategic objectives

So… what are we going to do?

4. Leverage 1 thru 3 to prioritize and deliver on the commitments set forth in the Technology Strategy

5. Leverage IT management planning concepts to surface needed improvement initiatives and deliver on them
   - "Improvement Programs / Plans" in functional areas of need (i.e. Information Security Improvement Plan)
   - "Operational Plans" for each fiscal year, by program, which identify the IT-initiated work that we need to deliver to a) stay current, b) implement new capabilities/platforms for the college, c) introduce new IT processes that make us more efficient or d) drive legacy / wasteful systems or processes out of the college

6. Standardize and rationalize technologies to maximize efficiency and value to the college while recognizing and supporting trends like BYOD

So… what are we going to do?

7. Leverage the hell out of the cloud and reduce college ownership of backend IT infrastructure assets

8. Become highly adept at IT adult education and training

9. Be the undisputed leader in IT Service Delivery in Nova Scotia Higher Education

10. And more.