# Tuesday April 12, 2016

**Todd Orr, Duke University**
*Welcome*



- 19th int. HERUG, 1996/97 beginning at MIT
- Duke:
  - 15000 students
  - 37000 employees incl 7000 medical researchers
  - Endowment 7.3 billon $ (2.5 billion university budget, the other part health revenue)
  - 2nd biggest private employer in NC (after Walmart) as HER is in many states often biggest or second biggest employer

**Steven Lucas, SAP**
*Digital Transformation in Higher Education*

- SAP has transformed with the acquisition of companies like SuccessFactors, Ariba, Concor etc
- 3 mil US students access all courses online, 81% use mobile devices to study
- Entire industries have been reinvented digitally like logistics with UBER, hospitality with Airbnb
- The Digital Imperative
  - Digital Economy - eg stock trading is more than 90% algorithm driven digital trading,  John Deer sells tractors along with maximum yield information on crops computed by information collected from tractors all over the country including predictive maintenance
  - Digital Organization - connected and consequential
  - Digital Platform - HANA
- HANA as integrated platform for transaction, analysts, prediction etc with a special chipset for HANA specific instruction set co-innovated with Intel
- VORA -voracious Big Data analytics with Hadoop and Apache spark
- 40% of HANA customers run nothing else by SAP
- HANA Cloud Platform free for all developers to sign up for extension of HANA based application by template based development
- C4A - Cloud for Analytics is Business Objects based predictive analytics
- S/4HANA represents the new set of business applications making use of HANA capabilities
- The business network consists of:
  - ARIBA conducts trade network based in larger numbers than Amazon and Alibaba combined
  - ...
- Business Case: University of Kentucky implemented HANA for improvement of student retention


**Kevin Lyons, Garry Zacheiss, MIT**
*MIT's HANA Enterprise Cloud Migration*

- MIT runs SAP since 1996
- SAP integrates with many other applications
- HANA motivation
  - Foundation for S/4
  - Improve data warehousing from custom built non BW system
  - Improve performance of batch workloads
- HEC motivation
  - Space is everything - more data center space for research work
  - Increase resiliency - desaster recovery
  - Refocus MIT staff know how on MIT matters
- Code remediation showed only 2 impacted programs with critical statements plus another 60 issues with in-program sorting
- MIT does support packs once a year and wanted to combine this downtime and testing with HANA migration
- Project timeline for HEC transition was July to December to migrate MIT's 4 tier environment with a project team of 45 including SAP consultants
- Project structured in 4 scrum teams
- HEC environment appears like on premise part of overall system architecture through MITnet routing equipment installed in HEC environment
- DNS delegation through 4 HEC operated DNS servers
- Authentication Kerberos based: documented early in project!!

- Testing in 4 cycles. Last cycle is actual application testing with 35% automated test cases with 135 issues in 1600 testing cases
- Cutover was planned to happen over a weekend and worked from Friday 4pm until Sunday night
- Identification of systems test early in the project and get commitment from test teams
- HANA DB can behave differently with indexes, sorts, return of data
- 1.7 TB of data was reduced to 0.97 TB

**Hilde Vanhaute, KU Leuven**
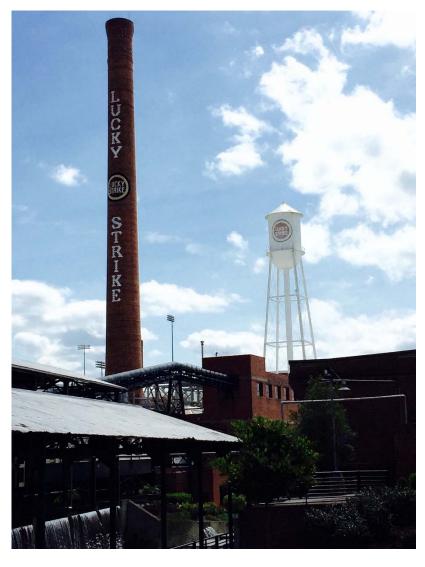*Education Dashboard on BO Web Intelligence*

- New means of insight became necessary after change of quality assurance system (shift from program evaluation to institution evaluation)
- 3 levels: Program (student, staff and lecturer input), faculty and university
- All stakeholders have views restricted to their realm of responsibility
- KPIs
  - Enrollments
  - Progression (how many students got all required credits)
  - Cohort goal achievement (percentage of a cohort that got their degree)
  - Alumni -> eg how many are within jobs
  - Student satisfaction
- Details tracked in enrollment
  - Enrollment numbers in comparison over years
  - Gender distribution
  - International students
- Dashboards can be distributed by PDF
- Authorization was done with BEX user exits calling data of HR Orgmanagement
- Choice against design studio because of printing deficiency there, Lumira not chosen because of additional license requirements
- Implementation in 3 month after good requirement preparation

**Ned Neely, Duke**
*End to End HCM*

- HR is decentralized on department level
- 100000 MSS transactions pa
- Many third party tools integrated
- Organization Management tools with OAM Security for limited access to specific organizations
- Position based security: Assignment of roles to positions
- The Portal has two factor authentification and is single access point
- Successfactors does not supply the functionality Duke has implemented in HCM
- Duke will move HCM to HANA on premise

**Ans Berghmans, KU Leuven**
*E-Recruitment*

- Start in 2010 on top of SAP e-recruitment a solution to publish vacancies to the job-website of KU Leuven
- Different profiles for different job types (eg professors have duties, non academics have responsibilities) resulting in different application forms
- HR department conducts selection activities for non-academic staff, academics are selected by the departments' recruiting committees
- Applicants can login with self-registration
- The job site is built with PHP and shows jobs by categories with drill down and RSS feed options within program areas
- E-Form based self services for description building of vacancies publication in SAP portal
- A list of responsible stakeholders for that vacancy is derived by the system
- Approval is done through workflow from department (HR is notified but not in the approval process)
- Application form is UI5 based and supports document upload
- Document Presentment is used to present an application for stakeholders
- Automated rejection letters (editable) can be produced for unsuitable candidates



Durham: Home of American Tobacco

# Wednesday April 13, 2016

**Yvette Cameron, SAP**
*HCM Direction and Success Factors*

- Digital Business Models are disruptive:
  - UBER transformed transportation
  - Airbnb transformed hospitality
  - Cars are not sold anymore but shared
  - On premise software moves to the cloud (access instead of possession)
- 4 drivers in workforce
  - Battle for talent and "All In" employees (Hudson Yards, NYC as initiative to combine work space, life space, collaboration space for an environment for engaged employees). E.g. Success factors provides continuous performance management automatically instead of having yearly reviews.
  - 5 generations workforce
    1. Digital natives
    2. Digital immigrants
    3. Digital voyeurs
    4. Digital holdouts
    5. Digital disengaged
  - Contingent workforce (freelancing limited time, non-employed)
  - Simplification: 74% of business leaders find complexity to be the reason for not reaching business goals -> success factors will not replicate HCM processes but comes from web user experience. Consumer style experiences are expected
- Organizations need a learning focus
- Tomorrow's jobs don't exist today
- "glass door" gives independent experience about employers
- Intelligent services recommend courses of action based on events and best practice even collected from activities of other companies
- Payroll localized for 33 countries, 41 languages
- Built in decision support eg by compliance checks for diversity biases
- Extensibility is guaranteed through upgrades better than with customization
- HANA Cloud Integration enables deployment in combination with multiple other applications
- Payroll can be kept on premise with SAP ERP HCM with a hybrid combination with success factors functionality


**Al Ling, Chris Reichly, Margaret Walden, University of  Mississippi**
*Implementing Suite for HANA on premise*

- All prerequisite upgrades made in April 2015, live with HANA Dec 2015
- Main driver: speed up the system eg for better data driven strategic decisions and SLcM/OrgMgmt Table with 49 mil entries
- For ABAP remediation SAP expert was hired
  - Start with transaction SCI code inspection returns tons of results, so reduce to performance aspects and prioritize by date of last run
  - select* needed to be changed first
- Enterprise reporting for
  - procurement process was implemented
  - Institutional research

- Development freeze over November and December
- 50 to 60% data reduction rate
- Migration of production system ca 22 hours from 1 TB Oracle to 457 GB HANA
- After migration IP addresses were switched between Hana and Oracle systems
- After migration transport numbers were reset to tell development before and after Hana migration
- Connections to external databases were a problem because of the change of OS
- Cluster tables are changed to transparent tables
- Hana brought a huge increase of performance especially in the realm of student tracking
- New tools with Hana
  - SE16H
  - Hana optimized ALV grids
  - CDS views
  - AMDPs (SQL scripts)
- Basis team and developers had training at SAP facilities in advance
- SAP specialist came in for 3 weeks all together


**Kelli Kitch, SAP**
*S/4 HANA*

- Simplified data model
  - No indices
  - No aggregates
- New user experience
- Guided configuration
  - Assisted implementation
  - User assistance
  - Content awareness
- S/4 has built in analytics
- 74% of Hana Migration projects took less than 6 month
- From new General Ledger there is a migration path to S/4 Universal Journal but there is a path directly without going to GL first
- The road to S/4 is more like an upgrade than a migration with all the legacy reporting still working based on a virtual data model emulating the old structures
- S/4 will work with HCM and HCM will not be discarded but most of the new development goes to success factors


**Christine Street, Johannes Lombard (LSI) University of Cincinnati**
*BW on HANA*

- UC established in 1870
- BW Hana upgrade made activation and loading much faster
- Data compression by factor 5
- Ca 1 week for identifying risks in current solution
- Basis was NW 7.5
- Update can be done in 3 weeks
- Technical upgrade should be kept apart from optimizations
- 1896 hours of external consultants were used

- From BO 4.2 universes are no longer necessary, BO can point directly to Hana data
- 40% of reporting needs within Hana environment will still be covered by BW which makes necessary an overall DW strategy

**Harish Chava, Cornell Medical College**
*SAP HANA on Enterprise Cloud*

- 1.8 billion
- 7500 staff
- 5000 faculty
- Landscape ERP BW SRM PI SOLMAN etc
- Landscape was hosted already before Hana, when hardware renewal came up Hana Enterprise Cloud was the right business choice
- Big issue: UI had to be improved
- SRM is the most painful part of the upgrade
- New dimension components used
  - Lumira
  - Hana DataMart
  - Fiori
  - Data Services
- Projekt runtime from mid October to mid March
- Data had been moved from Data Center I to DC II on tapes by car (5 TB, 300 miles)
- Testing was supported by 'worksoft' for automated testing
- Project was sold to end users to be something like the yearly upgrades
- Downtime from 26.3 2am to 28.3. 9pm
- Challenges
  - BI Java not supported on HANA (meanwhile yes)
  - For HEC to be integrated network issues and IP changes
  - HEC supports only ASE aside of HANA
- 40% improvement in payroll processing
- 70% reduction in data extraction for BI
- Reduction in batch failures

**Usman Javaid Malik**
*Implementing SLcM in Lahore*

- 160 Universities in a country with 57% literacy
- University of Lahore has 28000 students, 7 campuses in 5 cities
- Variation of annual and semester programs
- ECC in wide use in Pakistan (government runs largest payroll implementation worldwide) so for ECC implementation consultants were easily available
- Admission process in Pakistan is very different and complicated and had to be built as individual program

# Thursday April 14, 2016

**Scott Seaman, Duke**
*Identity and Security Management*

- Many different identity types, a lot of them transient
- Many different locations especially medical sites
- Components
  - Oracle IDM
  - Kerberos
  - Shibboleth
  - Active Directory
  - LDAP
  - ...
- Challenge: Single point of entry
- Employees Identities get created through hiring MSS
- There is a unique ID that is permanently stored in Duke's Unique ID DB and is reused for different on boarding occasions
- Net ID is created first and then a SAP user is created
- When a person changes position this is communicated from ECC Orgmanagement to IDMS and roles are changed along
- All roles plus the net ID are terminated upon decommissioning of an employee


**Marcel Rabe, University of Amsterdam**
*Hacking a SAP System*

- Cookies are a risk: must not be issued on the top domaine
- Eduroam makes many users even unknown to your organization
- Greek ministry of finance's SAP system had been hacked
- There is an ancient SAP leak active in HANA
- University of Amsterdam has done security check with many dangerous results
- All system tiers need the same security because hacking one will give you potential access to the others
- **RFC gateway as protection desaster**. Whitelist and blacklist are necessary for protection!
- From gateway in Hacker SAP System a logon to unprotected remote gateway can be done, a user is created and endowed with DDIC as reference user and credentials
- There are **old BCode hashed old passwords** in the system that can easily be dehashed so they need to be cleaned out
- Check Early Watch mandate (069?)
- Amsterdam runs SOS report on a weekly basis


**Tedde Taege, University of Nebraska**
*Phished*

- 51 000 Students
- Spear-Phishing is a specifically targeted attack to individuals
- Some mails got through with the effect that for instance bank accounts for payroll had been changed

- After phishing attacks two factor authentication was considered
- Extended validation was in place (last 4 digits of social security number)
- Users are notified by mail when crucial information like bank accounts have been changed (which does not go a long way if the crooks have access to e-mail password through single sign on)
- Ca 15 institutions had been targeted
- **For FUB: Two-Factor- Authentication to protect IDM in portal to make it more difficult for intruders to change SAP back office password**



Duke University Hall of Fame (Basketball)

# Members Meeting

## Host presentations for HERUG 2017

- Istanbul
- Amsterdam

- Amsterdam won the vote and will be host for 2017
- EPFL wants to host 2019 at their 50th anniversary

## Issues for HERUG members:

- Future of OrgManagement with SuccessFactors -> unclear message from SAP about future of HCM
- Open discussion and unclear messaging of SAP on future of analytics -> will we still need BW, what is the future of BO vs Hana native tools etc
- S/4 is seen as a very laudable step but unclear is the question of migration tools: Do they work with new GL only?



# Agenda and presentations for download:
http://sites.duke.edu/herug2016/agenda/