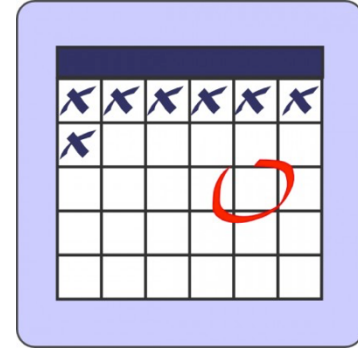


MIS 5121: Business Processes, ERP Systems & Controls
Week 13: *SAP Futures, Special System Access*

Video: Record the Class



MIS 5121: Upcoming Events



- December 11: ITACS Advisory Council Social Event – 5:00 till 6:00
 - You are invited, encouraged to attend
 - Class will start at 6:00
- Final Exercise (Risk Control Matrix)-*Due: Dec 14*
- Final Exam: *December 18 (at class time)*

SAP Futures Content thanks to:

Ray Adams

- SAP America, Inc.
- Field Services Director for Industry Business Solutions:
Chemicals

(Business and solution development at SAP for the chemical industry)



Chemicals in the Digital Economy

Ray Adams
Field Services Director,
Industry Business Solutions Chemicals

December 9th, 2016



The digital economy is disruptive. The rules have changed.

Companies in the chemicals industry face new challenges:

- How to quickly integrate acquisitions and spin off divestitures?
- How to reduce complexity?
- How to be more closely embedded in customer innovation cycles?
- How to rapidly enter new markets?
- How to extract competitive advantage from data?

Chemicals businesses must be reimaged to:

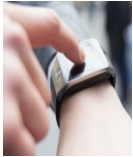
- Deliver tangible customer results
- Integrate with ecosystems to unlock superior value
- Simplify to slash cycle time
- Empower workers to optimize profitability
- Engage, enable, and excite the workforce

Digital Business is Here to Stay

Five Technology Breakthroughs That Are Changing Our World And Driving Massive Opportunities & Threats

HYPER-CONNECTIVITY

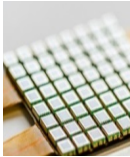
01



Every customer, supplier, logistics service provider and employee is connected

SUPER COMPUTING

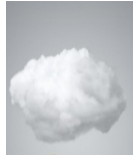
02



The limits of 20th century computing power are gone.

CLOUD COMPUTING

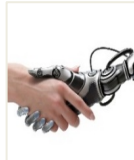
03



Business transactions are moving to new cloud based collaboration platforms

SMARTER WORLD

04



Sensors, robotics, 3D printing and artificial intelligence are the new normal.

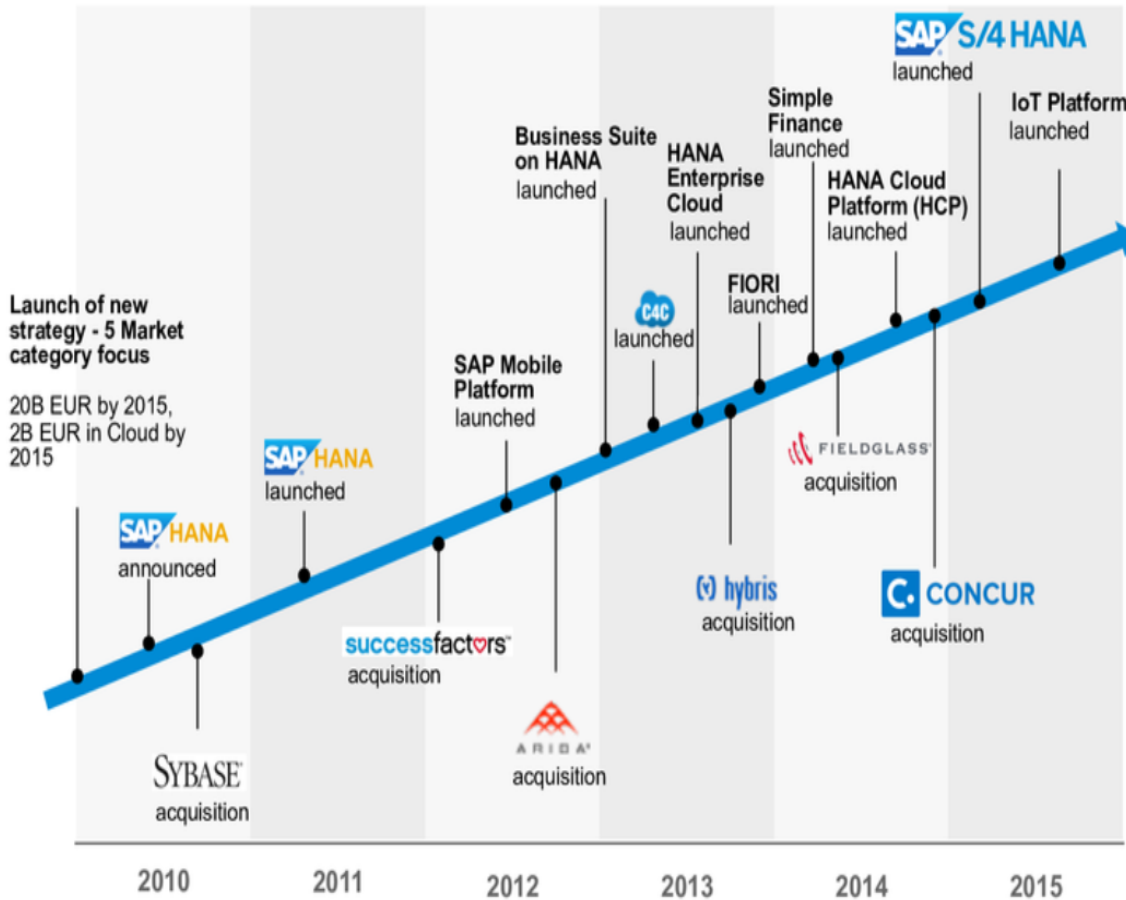
CYBER SECURITY

05



Bad actors have expansive new capabilities to attack, undermine and disrupt

SAP's strategic investments toward digital transformation



Tripled addressable market from \$110B to over \$350bn

Continued leadership in Core Apps - #1 in Enterprise Applications

Grew revenue in Cloud & Database categories by 100X

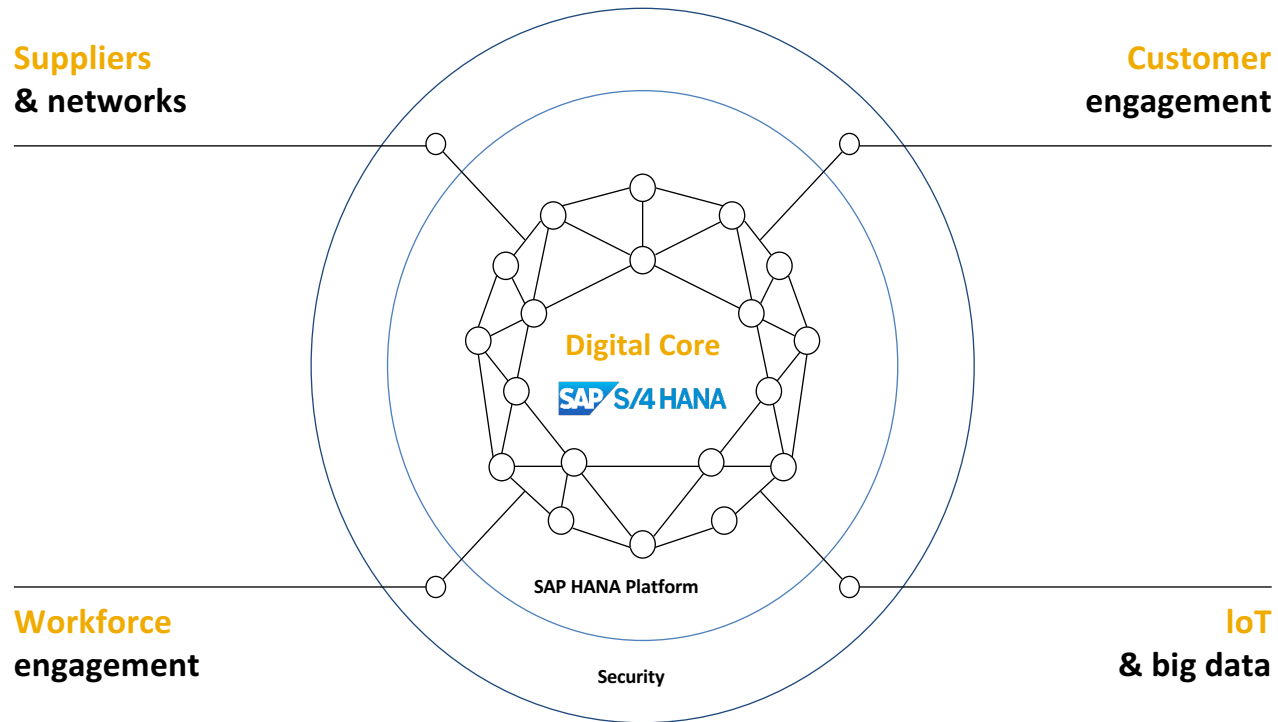
Invented In Memory platform – THE next generation real-time platform

Largest cloud company by users (80M users)

Largest business network (800B USD in transaction volume)

Our vision: enable chemicals companies to transform business models, reengineer business processes, and reimagine work

Our future direction: provide an integrated digital platform with SAP S/4HANA at the core, available in the cloud and on premise, interconnecting the chemicals value chain to drive Live Business outcomes



SAP S/4HANA Chemicals Trial with Industry Best Practices



The SAP S/4HANA Chemicals trial with industry best practices accelerates implementations and simplifies operations of chemical companies by providing configuration for business processes critical to the industry. The trial is available as a fully-configured software appliance and can be accessed in the SAP Cloud Appliance Library (CAL) or via Blu-ray using a dedicated ordering process.

Solution Highlights

- Based on 40+ years experience with chemical industry customers and partners
- Builds on SAP S/4HANA Best Practices core processes
- Supports overall over 90 preconfigured business processes for chemicals
- Integrated EHS (environment, health, and safety) processes

Key Benefits

- Evaluate preconfigured business processes prior to actual implementation
- Leverage latest innovations / capabilities of S/4HANA
- Use proven industry-standard processes
- Involve several business areas in the evaluation
- Reduce blueprinting by doing fit gap analysis
- Receive guidance in implementation provided by SAP and SAP partners

Questions from the Class (2016)

Portfolio/Pricing simplification process –

1. Eliminated industry bundles, solutions
2. Reduced pricing metrics by 20x to revenue, users, size
3. Cap-ex to Op-ex model – subscriptions

Implementation costs versus software purchase costs

1. From 10:1 to 3:1, goal of 2:1
2. Rapid Deployment Solutions, Best Practices configuration, Cloud-first development
3. Configuration versus customization
4. Native user interface modifications
5. Example: MS Excel add-in

Implementation Support

1. Max Attention support, 24x7
2. SAP Involvement
 1. Industries business unit, industry value engineers, pre-sales solution support, client partners
 2. SAP Consulting, SAP Services, development angels

Solution Capabilities

1. Industry expertise, cloud vs on premise options, global reach, extensive partner eco-system

Security

1. User-based, object-based, access controls, compliance (Nextlabs, Greenlight, NS2)



Ray Adams, Field Services Director
SAP Chemicals Industries Business Unit

Ray.adams@sap.com

+1-484-459-2485

Blog Questions: 2017

Category	Q1	Q2	Grand Total
Mobility			0
User Friendly		5	5
Simplicity		1	1
Training	4	3	7
Impl Cost	2	1	3
Customer Focus	5		5
Security	1	1	2
Flexible / Custom	4	3	7
Decision Making			0
Functionality	2	3	5
Interfaces		1	1
Change Mgmt			0
Scalable		1	1
New technologies	2	1	3

Blog Questions: 2016

Category	Q1	Q2	Grand Total
Mobility		7	7
User Friendly	1	13	14
Simplicity	1	2	3
Training	2	5	7
Impl Cost	2	6	8
Customer Focus	2	8	10
Security	3	5	8
Flexible / Custom	2	13	15
Decision Making	1	1	2
Functionality	10	6	16
Interfaces		2	2
Change Mgmt	7		7
Scalable		2	2

SAP Futures – My View

- In memory computing is technology driver SAP HANA is based on. Disruptive concept for ERP Systems
- Real time analysis at the next level of precision
- Simplification is a good thing (implementation, ease of use, reporting, ...)
- Value added capabilities emerging
- Huge effort to transition – when is the right time?

Key IT Controls Overview

- Firefighter / Emergency Access
 - 1-2 reasons for FF Use
 - Key differences vs. ECC access:
 - Audit of reason and transactions used
 - Emergency vs. routine use
 - 2-3 FF best practices
- Powerful ID's and Profiles
 - 2-3 risks that exist
 - Common control recommendations for each





Discussion

❖ Something really new, different you learned in this course in last week

**YOU LEARN
SOMETHING NEW
EVERY DAY**

❖ Questions you have about this week's content (readings, videos, links, ...)?



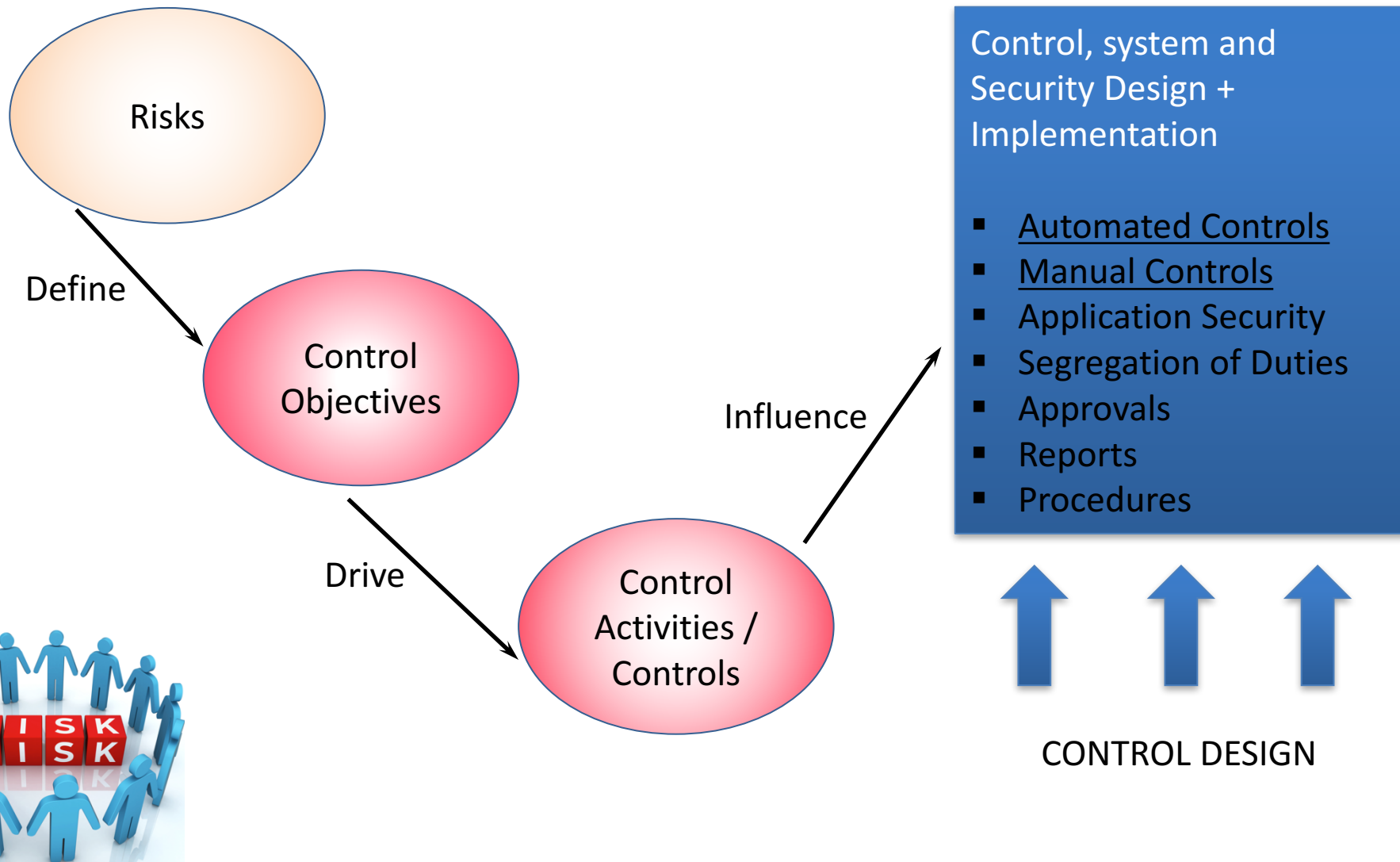
❖ Question still in your mind, something not adequately answered in prior readings or classes?



Risk / Control Matrix

Final Exercise

Risk / Control Matrix: Design Approach



Risk / Control Matrix: Final Exercise



- Agenda
 - Prior Class (*November 14*): Part 1 (Identify Risks)
 - Last Class (November 28): Part 2, 3
 - Risk Priority (Severity & Likelihood)
 - Identify Controls,
 - Link Controls to Risks
 - **This Class (*December 5*): Part 4 (Complete Control Definitions)**
 - Future Class (*December 12*): Part 5, 6 (Control Process / Audit Details; Personal Questions)
 - *Due December 15 11:59 PM*: Assignment Submission



Risk / Control Matrix: Final Exercise



Part 4: Augment key controls information for the Order to Cash (OTC) process at GBI

- Tab: Part 2 – GBI Controls
- Control Description (Columns F -> K) Mark each using taxonomy provided
 - Control Owner (Title): Choose **one** title from Appendix 1 or define appropriate missing title
- Financial Statement Assertions (Columns L-> Q) Mark with **x**
- Control Risk Assessment (Columns R -> U) Taxonomy column top
- Financial Statement Impact (Columns V -> AK) Mark statements impacted with **x**

Extra Slides

Risk / Control Matrix: Final Exercise



Part 1:

- a) Analyze the key risks that exist for the Order to Cash (OTC) process at GBI
- b) Define and document the key risks that exist for the Order to Cash (OTC) process at GBI
 - Tab: Part 1 – GBI Risks
 - Identify at minimum 25 risks in the process
 - Identify a minimum 4 risks in each of the OTC sub-processes:
 - ✓ **OR&H:** Order Receipt and Handling
 - ✓ **MF:** Material Flow (shipping)
 - ✓ **CI:** Customer Invoicing
 - ✓ **PR&H:** Payment Receipt and Handling



Risk Assessment



Risk / Control Matrix: Final Exercise



Part 2: Identify key controls for the Order to Cash (OTC) process at GBI

- Tab: Part 2 – GBI Controls
- Identify at minimum 15 controls for the process
- Identify a minimum 3 controls in each of the OTC sub-processes:
 - ✓ **OR&H:** Order Receipt and Handling
 - ✓ **MF:** Material Flow (shipping)
 - ✓ **CI:** Customer Invoicing
 - ✓ **PR&H:** Payment Receipt and Handling
- At least two (2) controls must be Automated / Config controls



Risk / Control Matrix: Final Exercise

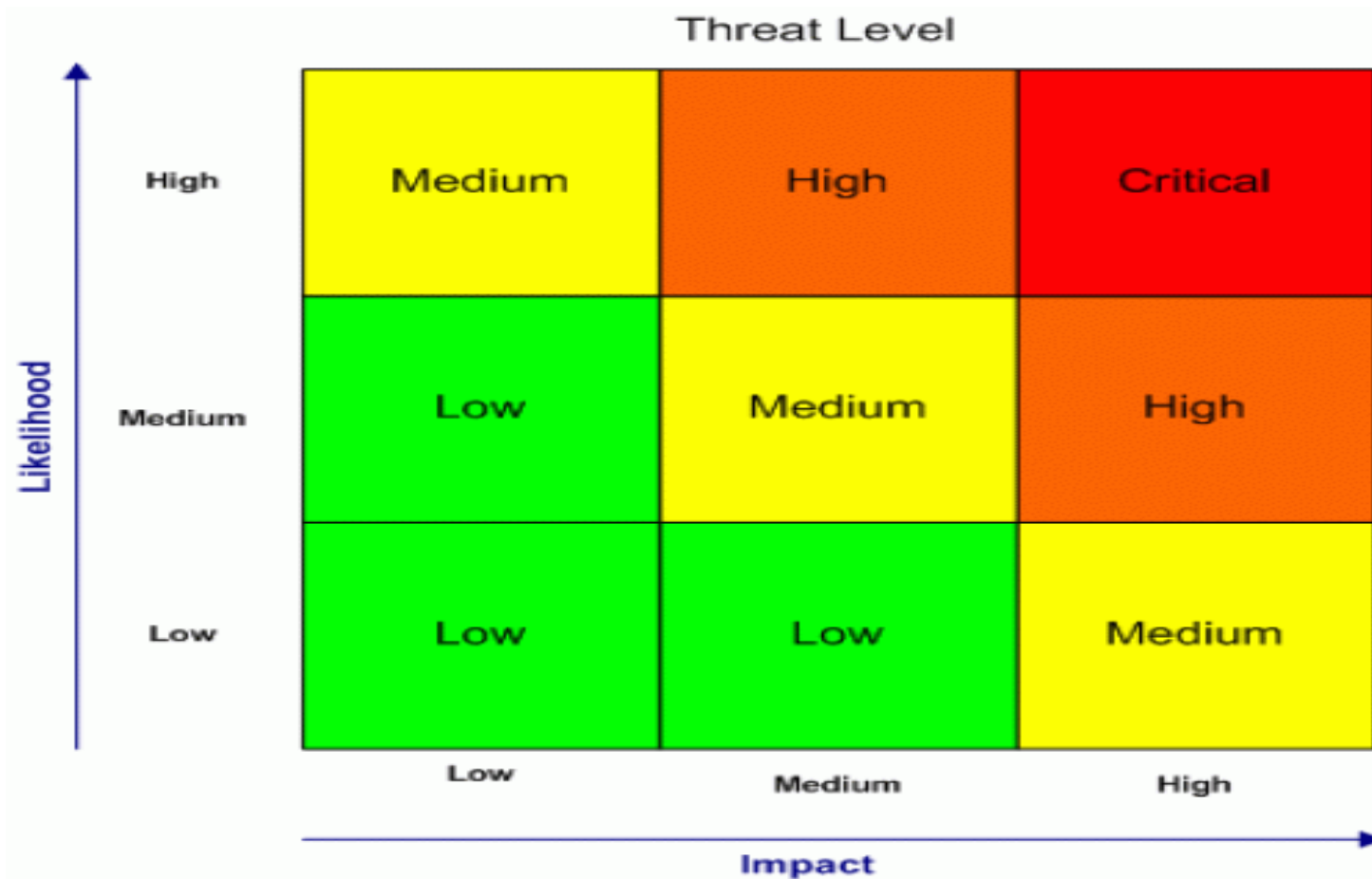


Part 3: Link Risks (Part 1) to the Controls (Part 2)

- Tab: Part 1 – GBI Risks
- At least one (1) control must be identified for each risk identified as High Severity or High Likelihood / Frequency
- A given control may address multiple risks (listed once in Part 2 tab and multiple times in Part 1 tab)
- A given risk may be addressed by multiple controls (listed once in Part 1 tab and multiple times in Part 2 tab)
- Risks without out a control:
 - ✧ Acceptable Risk: Business agrees no controls will be developed
 - ✧ TBD (To Be Determined)



Extra Slides





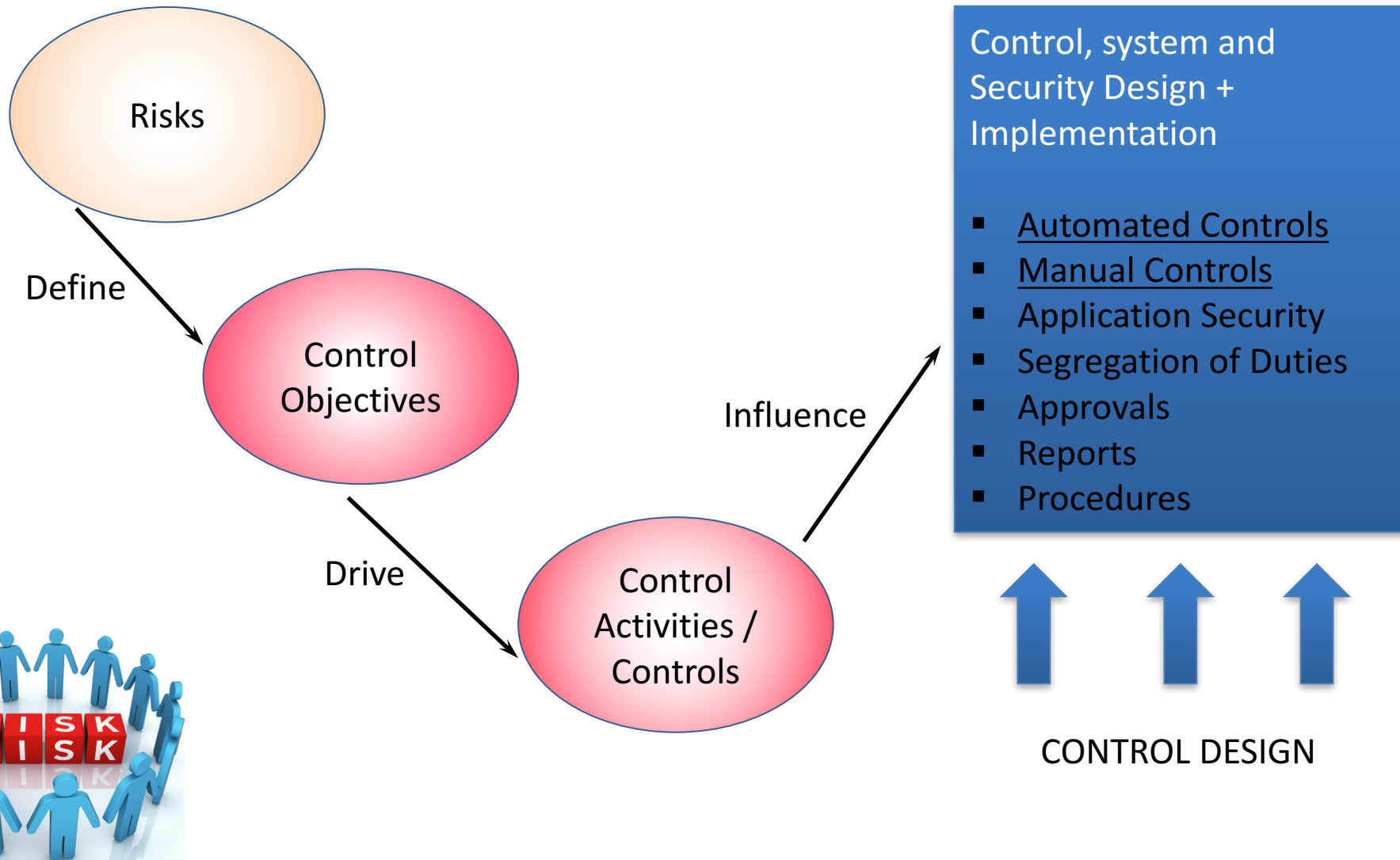
Risk / Control Matrix: Final Exercise



Parts

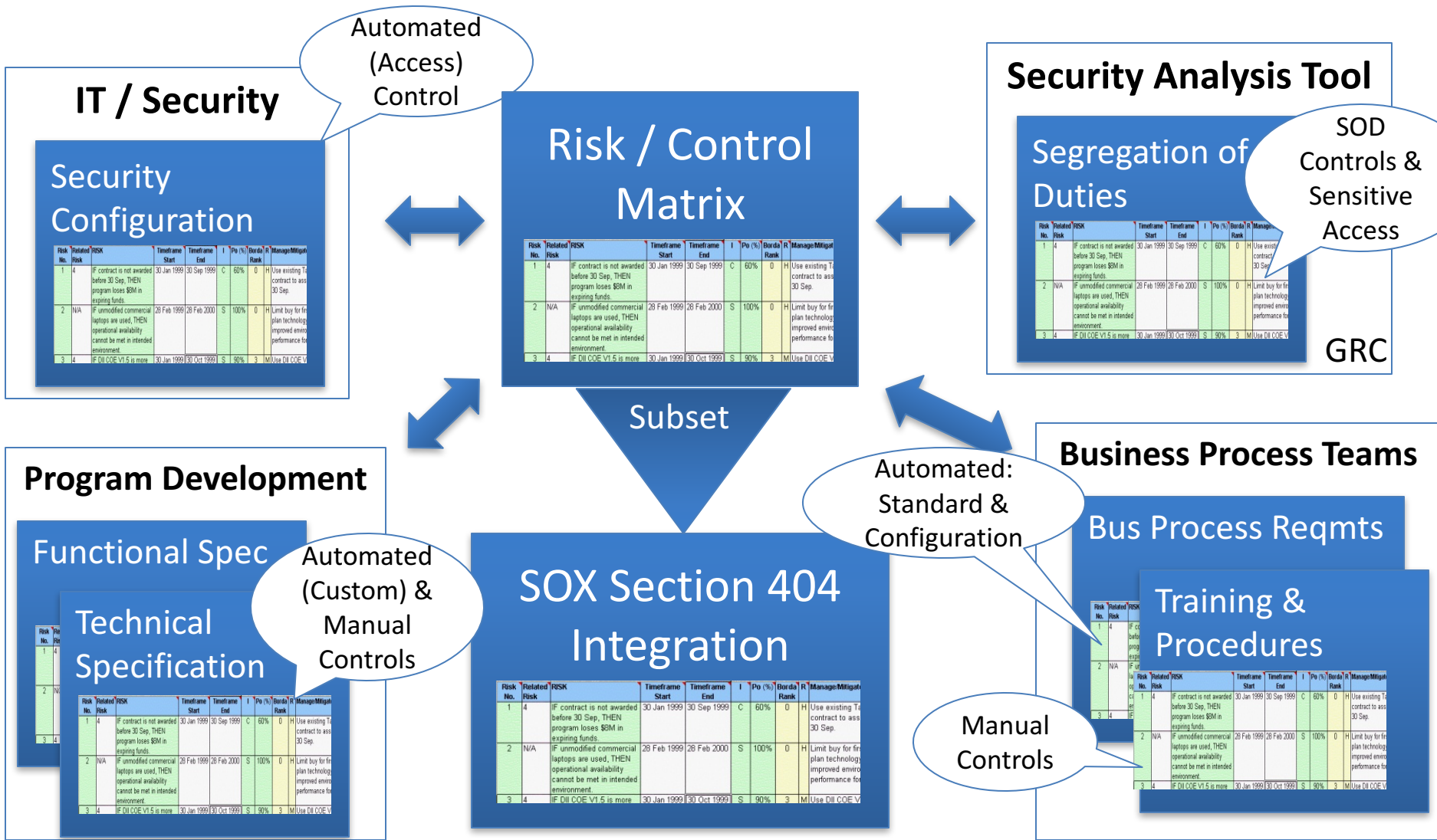
1. Analyze and define the key risks that exist for the Order to Cash (OTC) process at GBI
2. Guided by the risks you identified (esp. the High Severity and High Likelihood / Frequency risks) identify the key controls that will be used in the OTC process.
3. Link the Risks from Part 1 to the controls in Part 2.
4. Complete definition of the controls (classifications, links to assertions, etc.)
5. Write auditable control process documentation for 1 manual and 1 automated (configuration) control identified.
6. (Individual vs. Team submission): Couple questions about your work as a team to complete this and other exercises. (Optional)
Details will be announced via a blog post in last couple weeks of class.

Risk / Control Matrix: Design Approach



Controls: Integration Points

Risk/Control Matrix can serve as the primary vehicle for integrating control design into project activities and deliverables



Controls: Integration Points

Risk/Control Matrix can serve as the primary vehicle for integrating control design into project activities and deliverables

