



MIS 2101/2901
EXAM 2 REVIEW

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DIAMOND PEER

EXAM FORMAT

25 Multiple Choice Questions

- ▶ 5 from assigned readings
- ▶ 10 from assigned videos & lectures
- ▶ 10 from Mini-Case

Topics:

ERP, Decision Support, Knowledge Management, SDLC, Digital Business Innovation

Reminder:

Bring a #2 pencil and highlighters!



3.1.1

ENTERPRISE SYSTEMS (ERP)

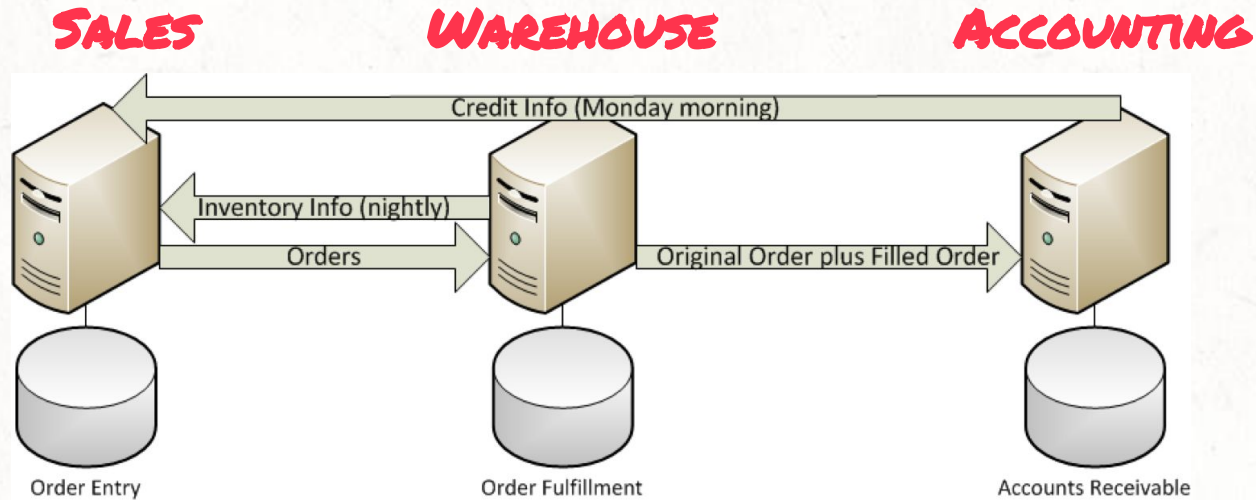
ENTERPRISE RESOURCE PLANNING

- ▶ Integrate processes across various business functions into one complete system
- ▶ Central feature: shared database
 - Different divisions rely on same information
 - Continuously updated view
- ▶ High risk, high cost, great benefits
- ▶ Improves operations & decision making → lowers cost

VALUE PROPOSITION

- ▶ Global, real-time view of data → companies can address concerns proactively and drive improvements
- ▶ Improves compliance with regulatory standards & reduces risk
- ▶ Automates core business operations
- ▶ Enhances customer service by providing one source for billing and relationship tracking.

LEGACY SYSTEMS



- ▶ Separate systems that really do make each functional area more efficient
- ▶ Problems:
 - Standalone systems
 - Organization as a whole not more efficient
 - Multiple copies of data
 - Build and support all system interfaces
 - Different computing platforms
 - Each system interface designed differently

CHALLENGES + BENEFITS OF ERP

CHALLENGES

- ▶ Adoption
- ▶ Complex Configuration
- ▶ Complex Implementation
- ▶ High Risks
- ▶ High Costs
- ▶ Internally focused

BENEFITS

- ▶ Data-driven decision making
- ▶ Standardize business processes based on industry best practices
- ▶ Reduce operating costs

SCM, ERP, CRM

SUPPLY CHAIN MANAGEMENT (SCM)


Supplier-focused

ENTERPRISE RESOURCE PLANNING (ERP)

Internally-focused

CUSTOMER RELATIONSHIP MANAGEMENT (CRM)

Customer-focused

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3.1.2 DECISION SUPPORT

THE DECISION MAKING PROCESS

- ▶ Define the problem
- ▶ Identify limiting factors
- ▶ Develop potential alternatives
 - Analyze alternatives
 - Select best alternative
- ▶ Implement Decision
- ▶ Establish a Control & Evaluation System

TYPES OF DATA

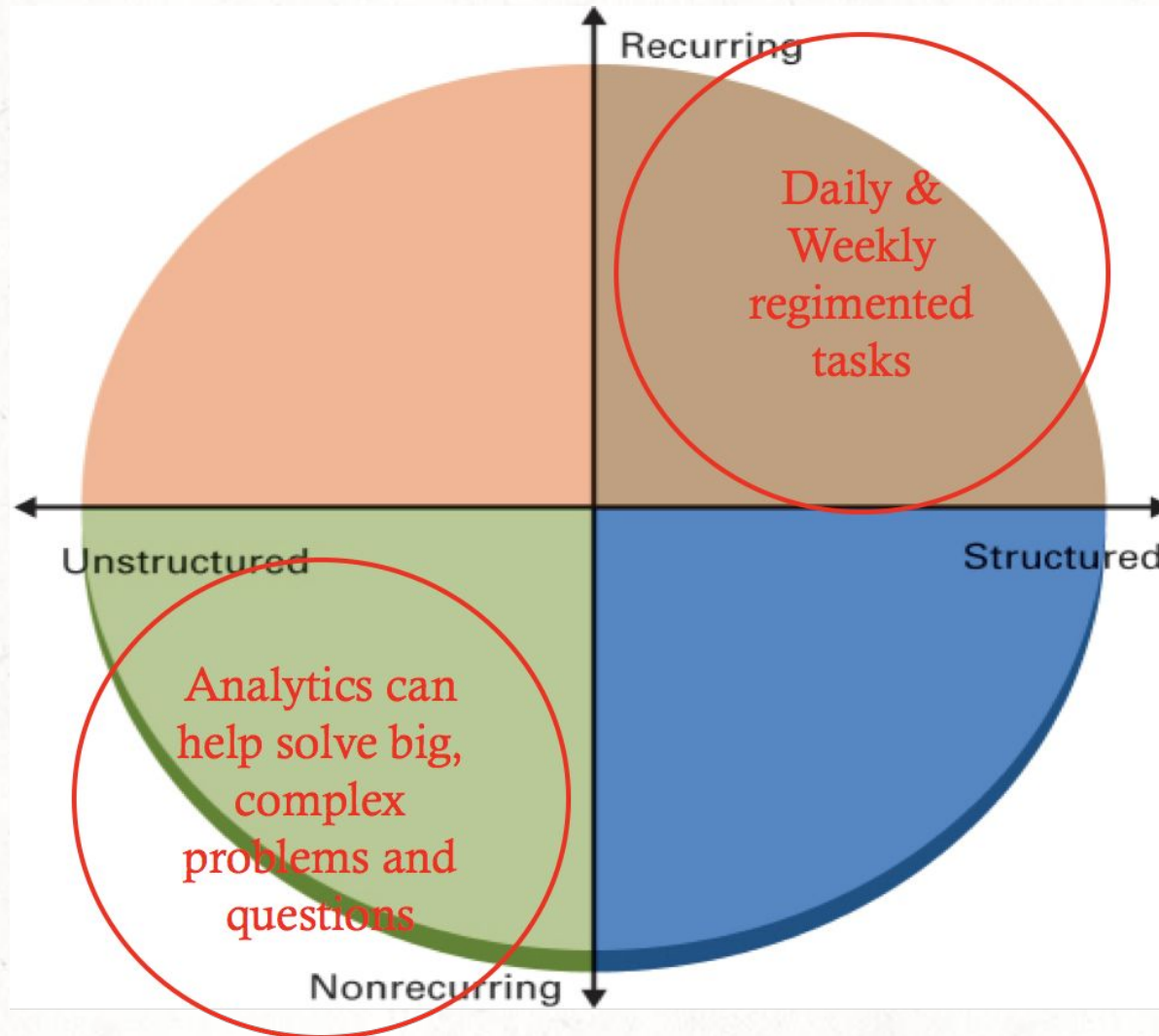
STRUCTURED

- ▶ Everything we've done in this course thus far!
- ▶ ERD
- ▶ Organizational databases
- ▶ ERP
- ▶ Clearly defined data entities, types, relationship, hierarchies

UNSTRUCTURED

- ▶ 90% of data
- ▶ User generated data
 - Email, facebook posts, tweets, comments on sites, etc.
- ▶ Chaotic

TYPES OF DECISIONS



DATA ANALYTICS

- ▶ Making sense of large data sets and unlocking patterns for better decision making
- ▶ Often using data visualization

DATA

- ▶ Raw
- ▶ Unstructured
- ▶ Meaningless
- ▶ Factual

INFORMATION

- ▶ Where data is captured
- ▶ Meaningful data & statistics

KNOWLEDGE

- ▶ Gaining insight
- ▶ Making actionable decisions

DESCRIPTIVE ANALYTICS

- ▶ What **is** happening

PREDICTIVE ANALYTICS

- ▶ What **will** happen

OLTP VS. OLAP

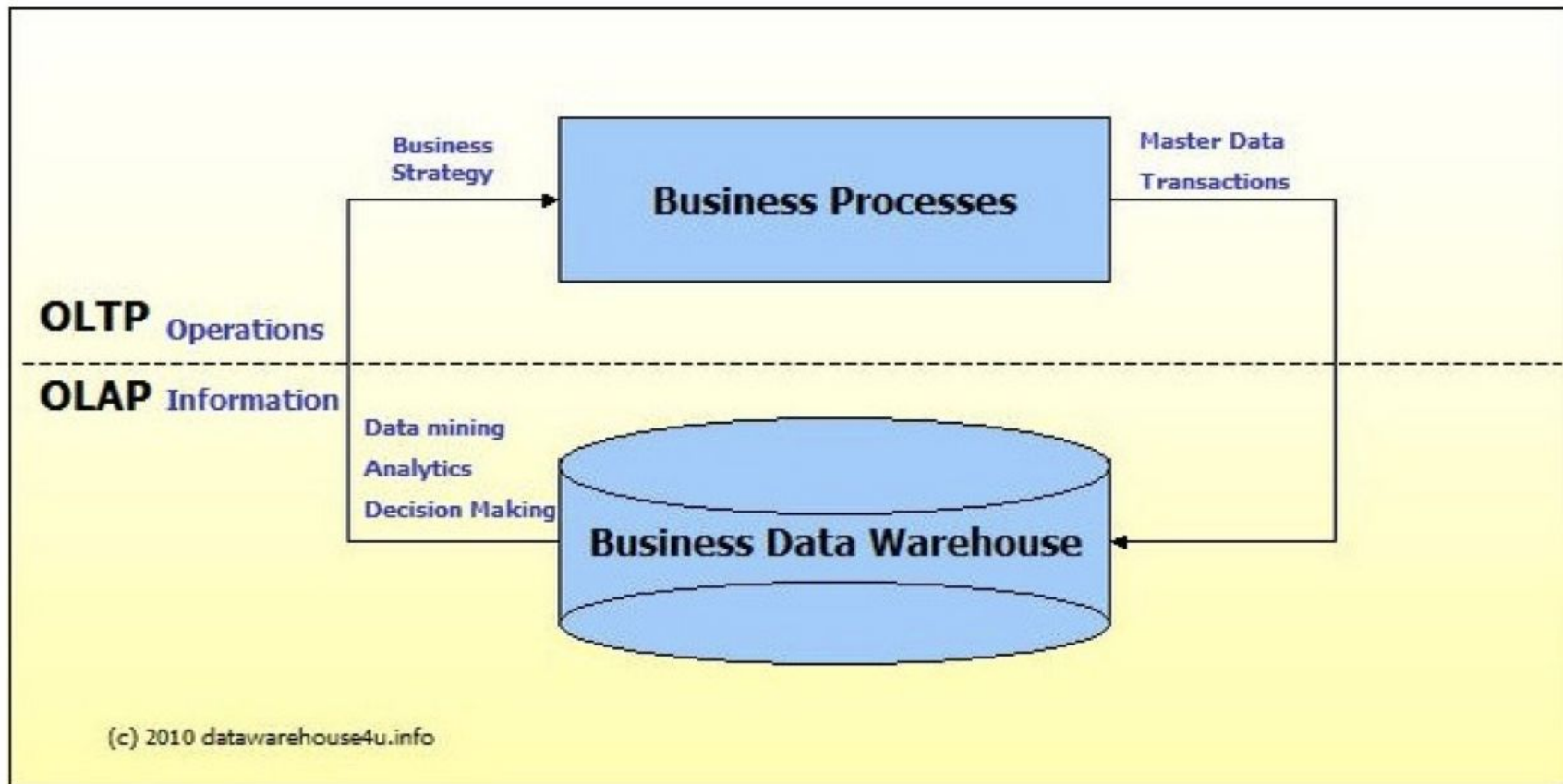
ONLINE TRANSACTION PROCESSING

- ▶ facilitate and manage transaction-oriented applications
- ▶ large number of transactions
- ▶ focus on quick data entry and retrieval

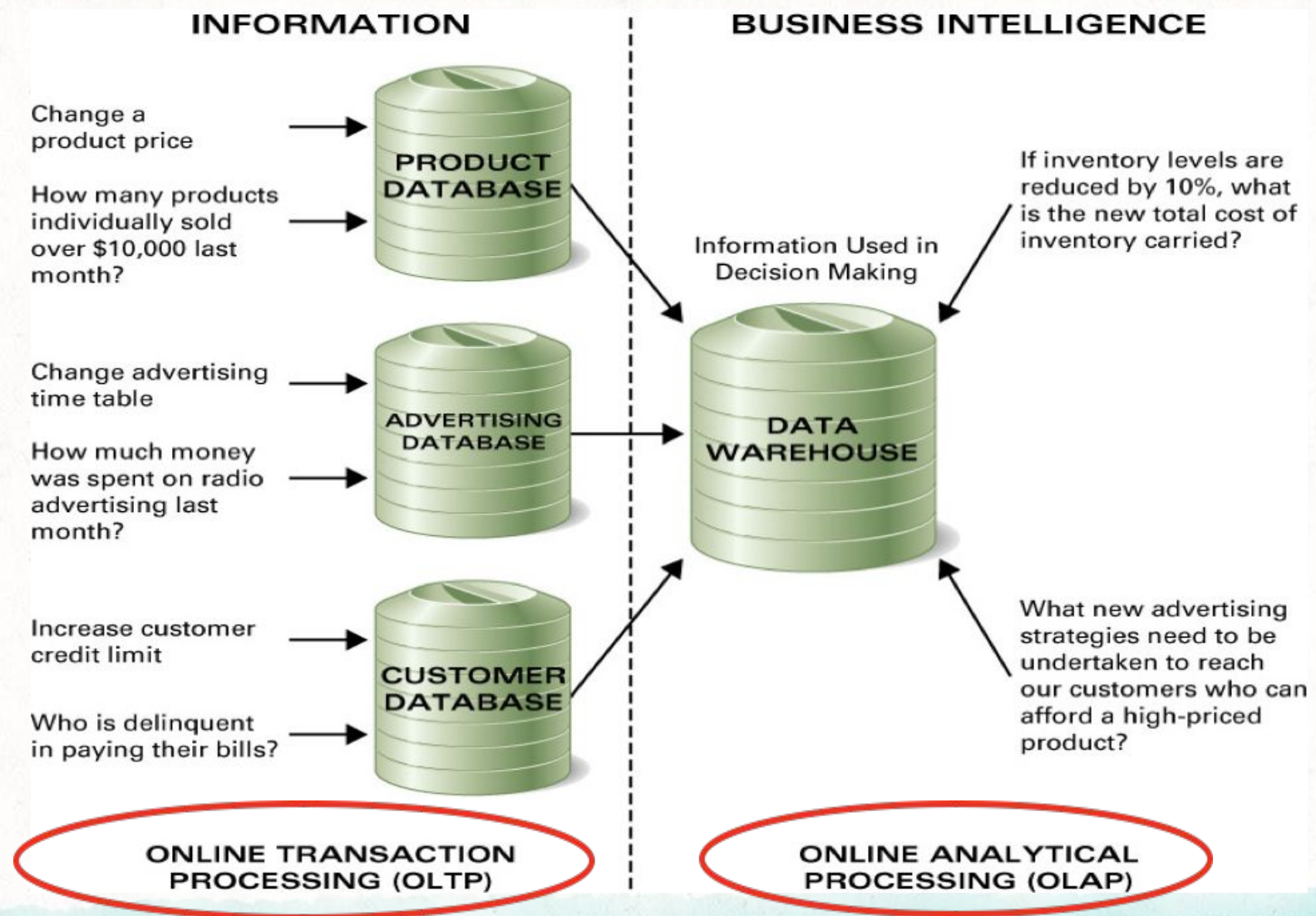
ONLINE ANALYTICAL PROCESSING

- ▶ analyzing data to look for insights
- ▶ aggregated, historical data stored in multidimensional schemas
- ▶ low volume of transactions
- ▶ more complex queries
- ▶ data mining

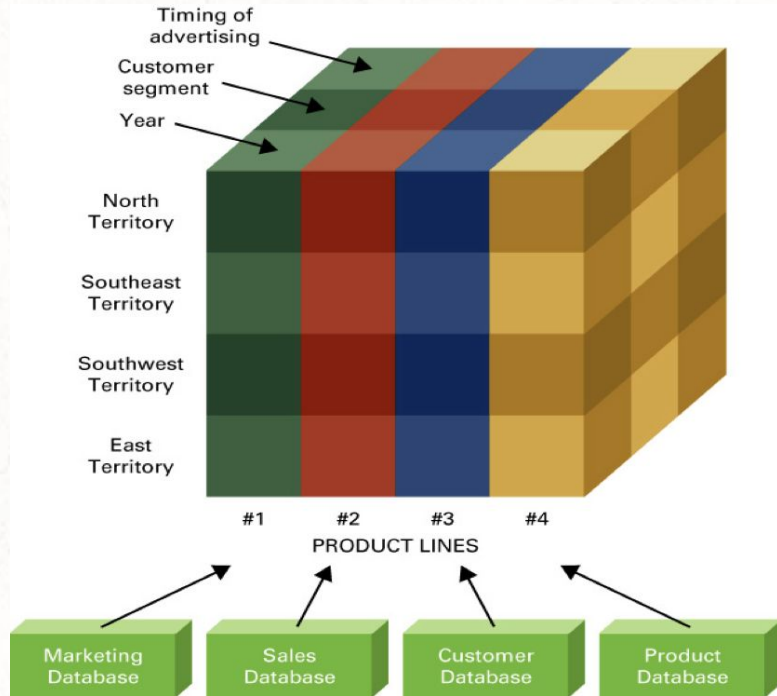
OLTP VS. OLAP



DATABASE & DATA WAREHOUSE

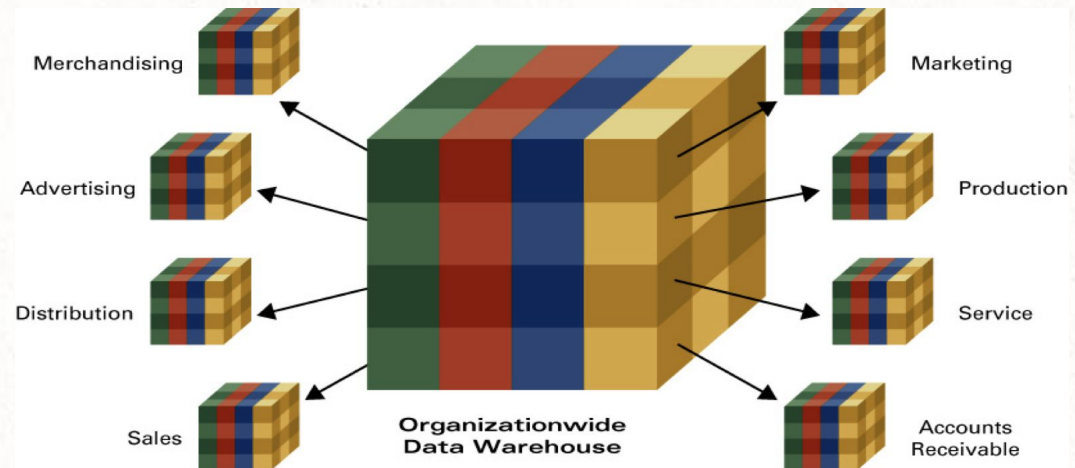


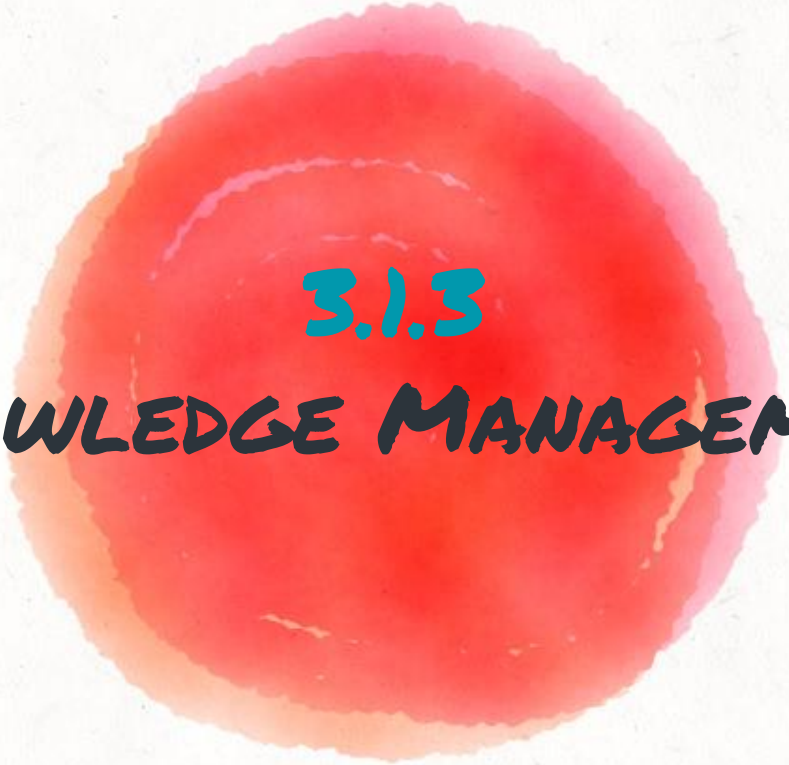
HYPERCUBES & DATA MARTS



HYPERCUBES

DATA MARTS





3.1.3

KNOWLEDGE MANAGEMENT

KNOWLEDGE MANAGEMENT

- ▶ Making the best use of knowledge by **capturing, developing, sharing,** and **effectively using organizational knowledge.**
- ▶ What KM consists of:
 - Content Management
 - Expertise Location
 - Lessons Learned
 - Communities of Practice (COPs)

TACIT VS. EXPLICIT

TACIT KNOWLEDGE

- ▶ Internalized knowledge
- ▶ Gained through experiences
- ▶ Practical & action oriented
- ▶ Hard to transfer by writing it down or verbalizing it
- ▶ Knowledge is lost when people retire

EXPLICIT KNOWLEDGE

- ▶ Readily articulated, codified, accessed, verbalized
- ▶ Easily transmitted to others
- ▶ Mostly stored in certain media:
 - Manuals, how-to videos
 - Encyclopedias
 - Textbooks
 - Works of art
 - Product design

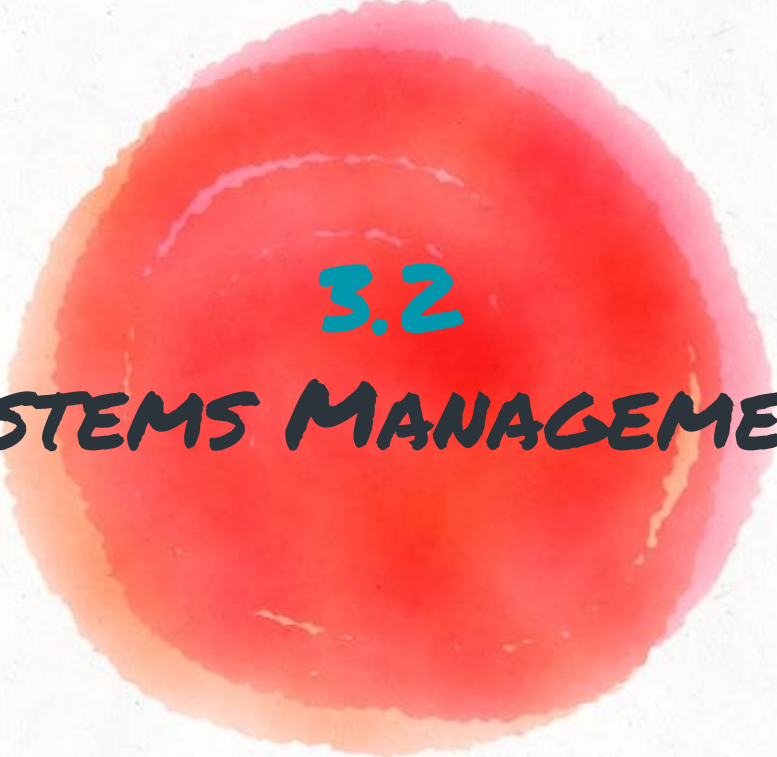
CHALLENGES + BENEFITS OF KM

CHALLENGES

- ▶ Difficult employee buy-in
- ▶ Knowledge overload
- ▶ Information obsolesce
- ▶ Being enamored by the technology and forgetting the goal

BENEFITS

- ▶ Improve organization's performance
- ▶ Decrease learning curve of new employees
- ▶ Prevent "reinvention of the wheel"

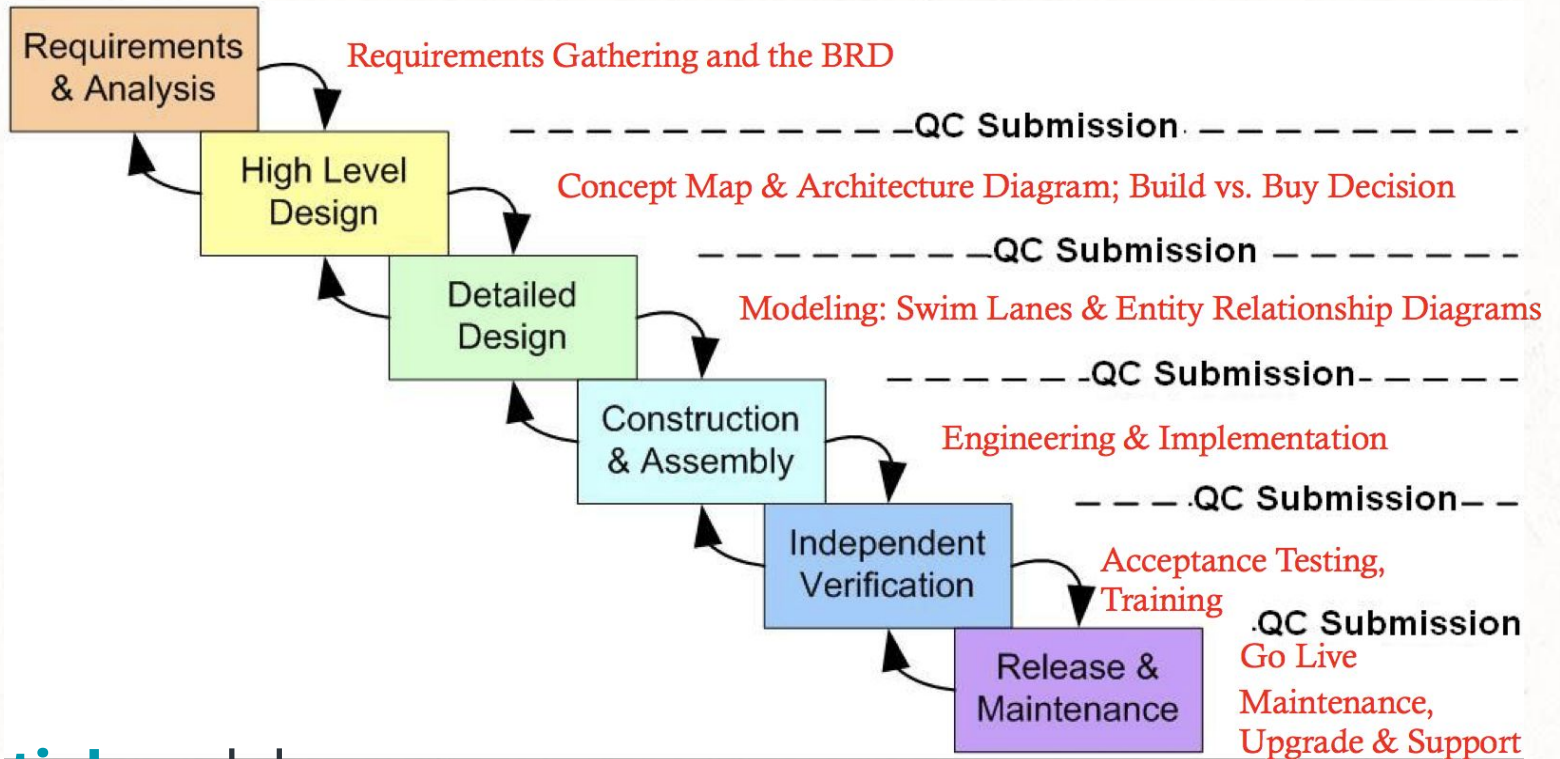


3.2
SYSTEMS MANAGEMENT

SYSTEMS DEVELOPMENT LIFECYCLE

- ▶ aka application development lifecycle
- ▶ Process for planning, creating, testing, and deploying an information system
 - Hardware only, software only, or both
- ▶ Waterfall vs. Agile Methodologies

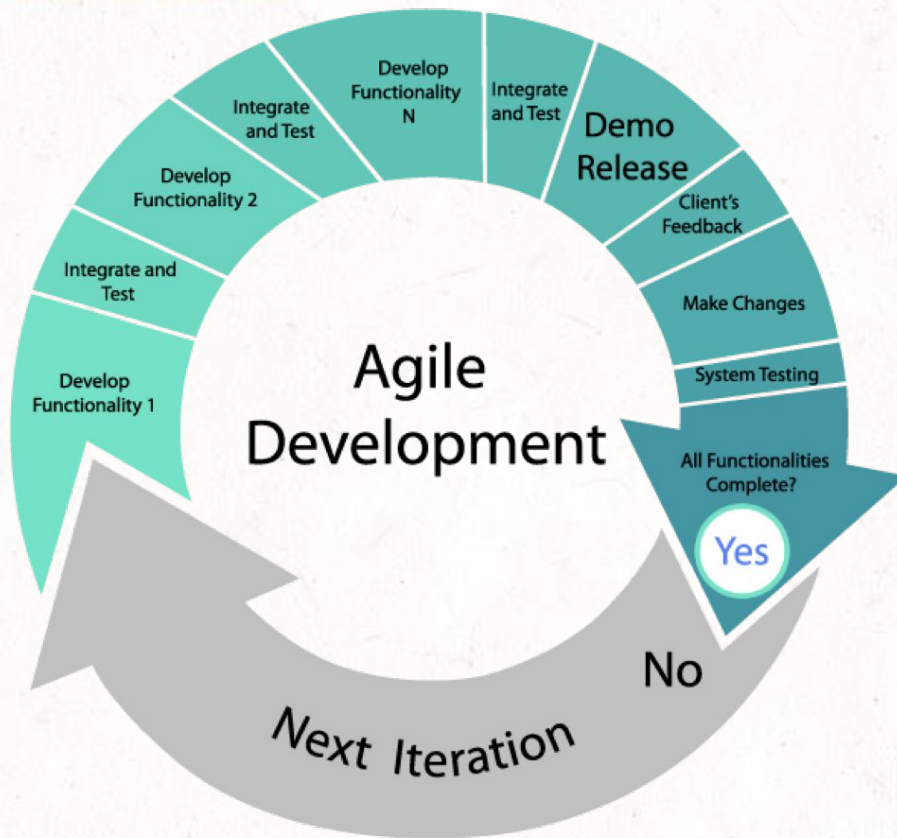
WATERFALL METHODOLOGY



Sequential model

- ▶ Output of each stage becomes the input for the next
- ▶ Focus on complete planning & predictable results
- ▶ End solution is known

AGILE METHODOLOGY



Iterative approach

- ▶ Typically in software development
- ▶ Focus on limited project scope & multiple iterations to improve products
- ▶ End solution is unknown

BUILD VS. BUY

BUILD CUSTOM SOFTWARE

- ▶ Building large business that can spread cost of system over a huge number of clients
- ▶ Off-the-shelf software can't meet every need
- ▶ Canned solutions are rigid
- ▶ OTS software may not be compatible with other programs

BUY CANNED SOLUTIONS

- ▶ Limited budget
- ▶ Lack of technical proficiency
- ▶ Lack of time
- ▶ Great canned software is already available
- ▶ Technology would NOT be a competitive advantage

REGULATORY COMPLIANCE

SARBANES-OXLEY

Compliance related to corporate accounting

HIPAA

Health Insurance Portability & Accountability Act

HITECH

Health Information Technology for Economic and Clinical Health Care Act
(adds onto HIPAA)

FDA

Food & Drug Administration - establishes many compliance considerations

CMS

Centers for Medicare & Medicaid Services - oversees key health care programs and HIPAA/HITECH

**KNOW HOW THEY
AFFECT IT/IS
PROJECTS!**



3.3

DIGITAL BUSINESS INNOVATION

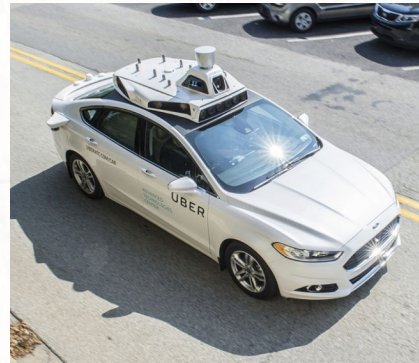
DISRUPTIVE INNOVATION

- ▶ Internet removes trade-off between richness of info and reach
 - previously a competitive advantage
- ▶ Internet intensifies competition and decreases profit margin
- ▶ The disruptive power of internet:
 - Marketing products and services
 - Processing payments
 - Discovering new prospects
 - VR driven business
 - More crime opportunities

2017 TRENDS IN CONSUMER ELECTRONICS



DIFFERENT REALITIES



DRIVERLESS CARS



THE CLOUD AND IOT



WEARABLES



ARTIFICIAL INTELLIGENCE

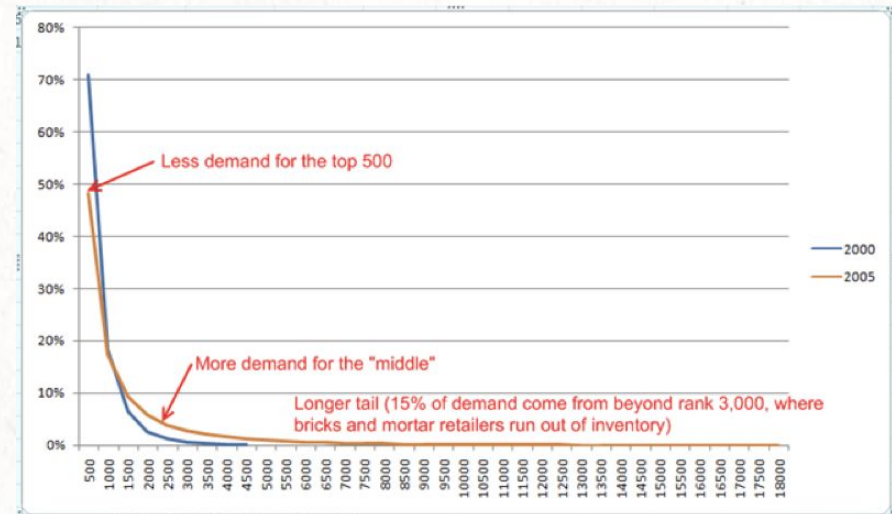
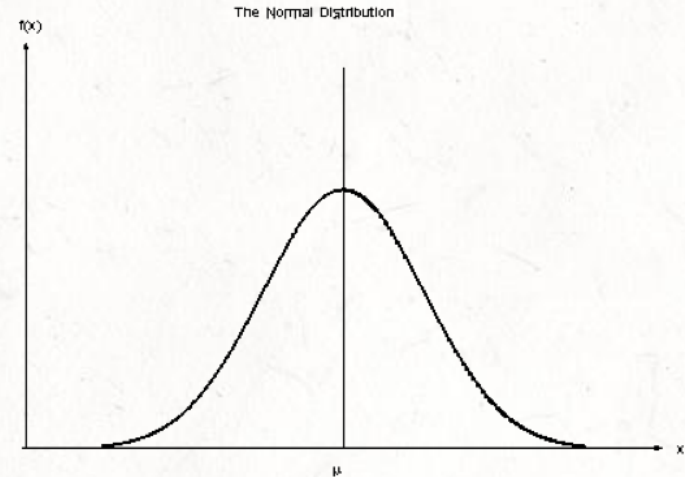
LONG TAIL

NORMAL DISTRIBUTION

- ▶ “Bell curve”
- ▶ Final grades in MIS 2101
- ▶ Symmetry around μ

LONG TAIL

- ▶ Better matching consumers to what they are searching for
 - Willing to pay more
 - There's money in the tail!
- ▶ Vast expansion of variety
 - variety > bestsellers
 - ZERO inventory cost
- ▶ Ex. Amazon, Netflix, Google ads



THANKS!



**any
questions?**