TOGAF 9 BUILDING BLOCK EXAMPLE REVISITED

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AGENDA

- REVIEW TOGAF 9 BUILDING BLOCK MODELING
- PRESENT A REVISED EXAMPLE OF BUILDING BLOCK MODELING

EARLY TOGAF TRAINING COURSE...

ARCHITECTURE MODELING PATTERNS AND BUILDING BLOCKS

- IN TOGAF, ARCHITECTURE PATTERNS ARE CONSIDERED TO BE A WAY OF PUTTING BUILDING BLOCKS INTO CONTEXT; FOR EXAMPLE, TO DESCRIBE A RE-USABLE SOLUTION TO A PROBLEM.
  - BUILDING BLOCKS ARE WHAT YOU USE
  - PATTERNS CAN TELL YOU HOW YOU USE THEM
- PATTERNS OFFER THE PROMISE OF HELPING THE ARCHITECT TO IDENTIFY COMBINATIONS OF ARCHITECTURE AND/OR SOLUTION BUILDING BLOCKS (ABBS/SBBS) THAT HAVE BEEN PROVEN TO DELIVER EFFECTIVE SOLUTIONS IN THE PAST, AND MAY PROVIDE THE BASIS FOR EFFECTIVE SOLUTIONS IN THE FUTURE.

BUILDING BLOCKS

- BUILDING BLOCKS HAVE THE FOLLOWING GENERIC CHARACTERISTICS:
  - A PACKAGE OF FUNCTIONALITY DEFINED TO MEET THE BUSINESS NEEDS ACROSS AN ORGANIZATION.
  - A TYPE THAT CORRESPONDS TO THE TOGAF CONTENT METAMODEL (SUCH AS ACTOR, BUSINESS SERVICE, APPLICATION, OR DATA ENTITY)
  - A DEFINED BOUNDARY AND IS GENERALLY RECOGNIZABLE AS "A THING" BY DOMAIN EXPERTS.
  - MAY INTEROPERATE WITH OTHER, INTER-DEPENDENT, BUILDING BLOCKS.

BUILDING BLOCK SPECIFICATION

- THE WAY IN WHICH ASSETS AND CAPABILITIES ARE ASSEMBLED INTO BUILDING BLOCKS WILL VARY WIDELY BETWEEN INDIVIDUAL ARCHITECTURES.
- EVERY ORGANIZATION MUST DECIDE FOR ITSELF WHAT ARRANGEMENT OF BUILDING BLOCKS WORKS BEST FOR IT.
- A GOOD CHOICE OF BUILDING BLOCKS CAN LEAD TO IMPROVEMENTS IN LEGACY SYSTEM INTEGRATION, INTEROPERABILITY, AND FLEXIBILITY IN THE CREATION OF NEW SYSTEMS AND APPLICATIONS.
- SYSTEMS ARE BUILT UP FROM COLLECTIONS OF BUILDING BLOCKS, SO MOST BUILDING BLOCKS HAVE TO INTEROPERATE WITH OTHER BUILDING BLOCKS. WHEREVER THAT IS TRUE, IT IS IMPORTANT THAT THE INTERFACES TO A BUILDING BLOCK ARE PUBLISHED AND REASONABLY STABLE.
- A BUILDING BLOCK'S BOUNDARY AND SPECIFICATION SHOULD BE LOOSELY COUPLED TO ITS IMPLEMENTATION.
- BUILDING BLOCKS CAN BE DEFINED AT VARIOUS LEVELS OF DETAIL, DEPENDING ON WHAT STAGE OF ARCHITECTURE DEVELOPMENT HAS BEEN REACHED.
- THE LEVEL OF DETAIL TO WHICH A BUILDING BLOCK SHOULD BE SPECIFIED IS DEPENDENT ON THE OBJECTIVES OF THE ARCHITECTURE.
- IN SOME CASES, A LESS DETAILED SPECIFICATION MAY BE OF GREATER VALUE.

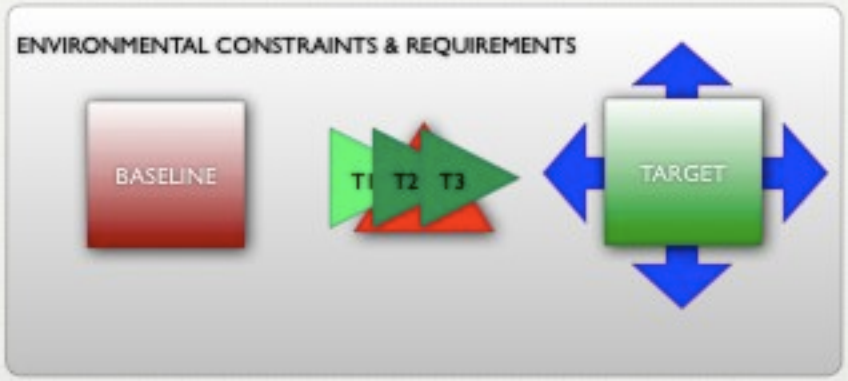
ARCHITECTURE BUILDING BLOCKS

- ARCHITECTURE BUILDING BLOCKS RELATE TO THE ARCHITECTURE CONTINUUM, AND ARE DEFINED OR SELECTED AS A RESULT OF THE APPLICATION OF THE ADM.
- CHARACTERISTICS:
  - CAPTURE ARCHITECTURE REQUIREMENTS; E.G., BUSINESS, DATA, APPLICATION, AND TECHNOLOGY REQUIREMENTS
  - DIRECT AND GUIDE THE DEVELOPMENT OF SBBS
- MINIMUM SPECIFICATION CONTENT:
  - FUNDAMENTAL FUNCTIONALITY AND ATTRIBUTES: SEMANTIC, UNAMBIGUOUS, INCLUDING SECURITY CAPABILITY AND MANAGEABILITY
  - INTERFACES: CHOSEN SET, SUPPLIED
  - INTEROPERABILITY AND RELATIONSHIPS WITH OTHER BUILDING BLOCKS
  - DEPENDENT BUILDING BLOCKS WITH REQUIRED FUNCTIONALITY AND NAMED USER INTERFACES
  - MAPPING TO BUSINESS/ORGANIZATIONAL ENTITIES AND POLICIES

SOLUTION BUILDING BLOCKS

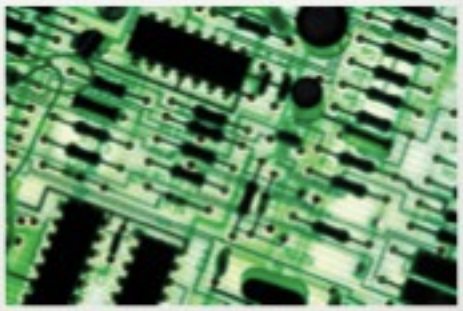
- SOLUTION BUILDING BLOCKS (SBBS) RELATE TO THE SOLUTIONS CONTINUUM, AND MAY BE REUSED, DEVELOPED, OR PROCURED.
- CHARACTERISTICS:
  - DEFINE WHAT PRODUCTS AND COMPONENTS WILL IMPLEMENT THE FUNCTIONALITY
  - DEFINE THE IMPLEMENTATION
  - FULFILL BUSINESS REQUIREMENTS
  - ARE PRODUCT OR VENDOR-AWARE
- MINIMUM SPECIFICATION CONTENT:
  - SPECIFIC FUNCTIONALITY AND ATTRIBUTES
  - INTERFACES; THE IMPLEMENTED SET
  - REQUIRED SBBS USED WITH REQUIRED FUNCTIONALITY AND NAMES OF THE INTERFACES USED
  - MAPPING FROM THE SBBS TO THE IT TOPOLOGY AND OPERATIONAL POLICIES
  - SPECIFICATIONS OF ATTRIBUTES SHARED ACROSS THE ENVIRONMENT (NOT TO BE CONFUSED WITH FUNCTIONALITY) SUCH AS SECURITY, MANAGEABILITY, LOCALIZABILITY, SCALABILITY
  - PERFORMANCE, CONFIGURABILITY
  - DESIGN DRIVERS AND CONSTRAINTS, INCLUDING THE PHYSICAL ARCHITECTURE
  - RELATIONSHIPS BETWEEN SBBS AND ABBS

THE TOGAF ARCHITECTURE PROCESS



THE BEGINNING OF OUR STORY

- IN TOGAF 7, TOGAF 8 AND TOGAF 9 THERE HAS BEEN AN EXAMPLE OF BUILDING BLOCK MODELING.
- XYZ MANUFACTURING WAS A MAKER OF DISCRETE ELECTRONIC COMPONENTS.
- THEY SOLD THESE COMPONENTS TO OTHER MANUFACTURERS.
- THEY MADE TO STOCK AND THEY DID NOT MAKE CUSTOMIZED COMPONENTS MANUFACTURING



IN OUR LAST EXCITING EPISODE...

- THE EXECUTIVES AT XYZ MANUFACTURING DECIDED TO IMPROVE THE EFFICIENCY OF ITS MOBILE SALES FORCE BY REPLACING PAPER BASED CONFIGURATION AND ORDERING SYSTEMS WITH AN IT SOLUTION.
- THE ARCHITECTURE TEAM DESIGNED A SYSTEM TO MOVE THEM TOWARDS AN N-TIER CLIENT SERVER ARCHITECTURE.
- THE PRINCIPAL GOAL WAS TO GIVE THE SALES FORCE IN THE FIELD DIRECT ACCESS TO THE SALES PROCESS BACK AT THE HEADQUARTERS.
- THIS WOULD ALLOW SALES STAFF TO CREATE AND VERIFY THE PRODUCT CONFIGURATION, TO CHECK THE PRICE AND AVAILABILITY OF THE GOODS, AND TO PLACE THE ORDER WHILE ACTUALLY WITH THE CUSTOMER.
- THE SYSTEM WAS IMPLEMENTED, AND EVERYONE LIVED HAPPILY EVER AFTER...
- UNTIL....

TEN YEARS AFTER...

- XYZ HAS BEEN ACQUIRED BY ITS DREADED COMPETITOR, KEYSTONE ENTERPRISES.
- KEYSTONE WISHES TO MANAGE THE ACQUISITION TO TRANSFER THE CUSTOMER BASE TO THEIR OWN PRODUCTS.
- DURING THE TRANSITION PERIOD, THE XYZ PRODUCT LINE WILL BE MAINTAINED AS A SEPARATE BUSINESS UNIT WITH ITS OWN SALES FORCE.
- TO ASSURE CUSTOMER RETENTION A NEW SALES FORCE AUTOMATION SYSTEM IS UNDER CONSIDERATION.
- A LOYALTY PROGRAM WILL BE IMPLEMENTED TO RETAIN CUSTOMERS

PRELIMINARY

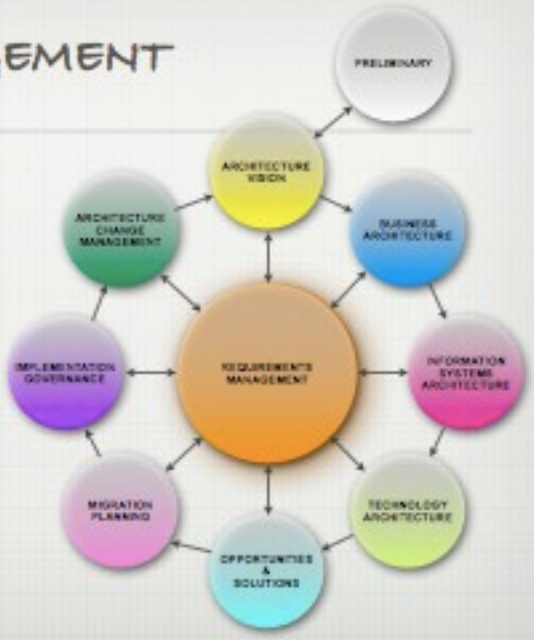
- OBJECTIVES
  - TO ESTABLISH THE ARCHITECTURE PRACTICE
  - TO DEFINE AN ORGANIZATION-SPECIFIC FRAMEWORK
  - TO ESTABLISH A SET OF ARCHITECTURE PRINCIPLES
  - TO STAFF AND TRAIN THE ARCHITECTURE PRACTICE
  - TO ACQUIRE APPROPRIATE TOOLS

KEYSTONE INC.
ENTERPRISE ARCHITECTURE

- IN THIS EXAMPLE, WE WILL ASSUME THAT:
  - KEYSTONE HAS COMPLETED ALL ASPECTS OF THE PRELIMINARY PHASE.
  - THERE IS AN ARCHITECTURE REVIEW BOARD THAT CONSISTS OF SENIOR BUSINESS AND IT LEADERS FROM ACROSS THE FIRM.
  - THE EA PRACTICE IS MATURE AND HAS GOOD SUPPORT FROM THE SPONSOR
  - THE XYZ SUBSIDIARY WILL UTILIZE THE KEYSTONE EA APPROACH

REQUIREMENTS MANAGEMENT

- OBJECTIVES
  - TO DEFINE AND OPERATE A PROCESS WHEREBY REQUIREMENTS FOR ENTERPRISE ARCHITECTURE ARE IDENTIFIED, STORED, AND FED INTO AND OUT OF THE RELEVANT ADM PHASES.



KEYSTONE INC.
ENTERPRISE ARCHITECTURE

- IN THIS EXAMPLE, WE WILL ASSUME THAT:
  - KEYSTONE HAS A FUNCTIONAL ENTERPRISE ARCHITECTURE REPOSITORY AND REQUIREMENTS MANAGEMENT SYSTEM
  - THE XYZ SUBSIDIARY WILL UTILIZE THE KEYSTONE EA REPOSITORY AND REQUIREMENTS MANAGEMENT SYSTEM

REQUEST FOR ARCHITECTURE WORK

- A REQUEST FOR ARCHITECTURE WORK HAS BEEN RECEIVED AND APPROVED BY THE ARCHITECTURE REVIEW BOARD
- THE VICE PRESIDENT OF SALES AND MARKETING AT KEYSTONE HAS REQUESTED AN ARCHITECTURE PROJECT TO DEVELOP A STAND ALONE SALES FORCE AUTOMATION SYSTEM FOR XYZ INC.

ARCHITECTURE VISION

- OBJECTIVES
  - TO ESTABLISH AN ARCHITECTURE CYCLE.
  - TO DEFINE THE PROJECT SCOPE, IDENTIFIES STAKEHOLDERS
  - TO CREATE AN ARCHITECTURE VISION
  - TO OBTAIN SPONSOR APPROVAL AND SUPPORT TO CONTINUE

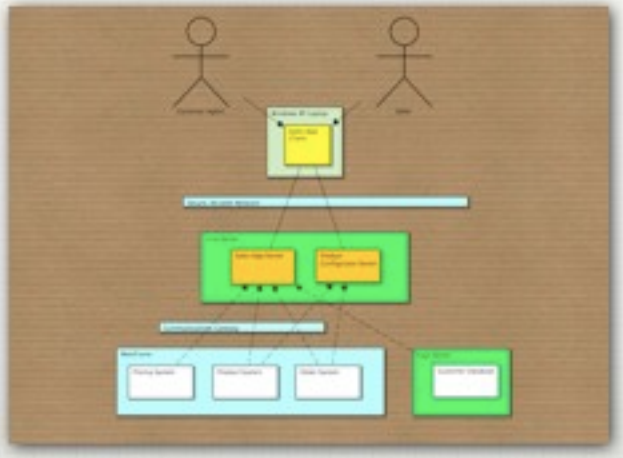
STAKEHOLDER ANALYSIS

- THE SALES FORCE ARCHITECTURE TEAM HAS CONDUCTED A STAKEHOLDER ANALYSIS
- THEY HAVE IDENTIFIED SEVERAL TYPES OF STAKEHOLDER GROUPS
- THEY HAVE SELECTED A SET OF VIEWPOINTS AND VIEWS TO MODEL THO STAKEHOLDER CONCERNS

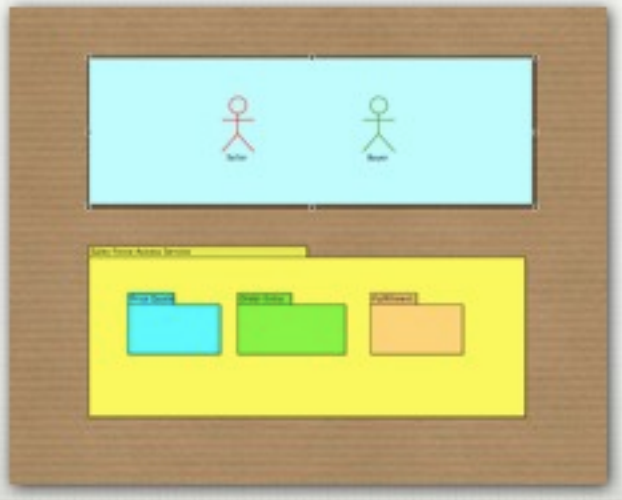
BUSINESS SCENARIO

- THE SALES FORCE ARCHITECTURE TEAM HAS CONDUCTED A BUSINESS SCENARIO.
- BASED ON THE BUSINESS SCENARIO, THEY HAVE A GOOD KNOWLEDGE OF THEIR INITIAL REQUIREMENTS
- THEY HAVE CREATED AN ARCHITECTURE VISION THAT ILLUSTRATES HOW THEY COULD ADDRESS THE PROBLEM

ARCHITECTURE VISION
BASELINE



ARCHITECTURE VISION
TARGET



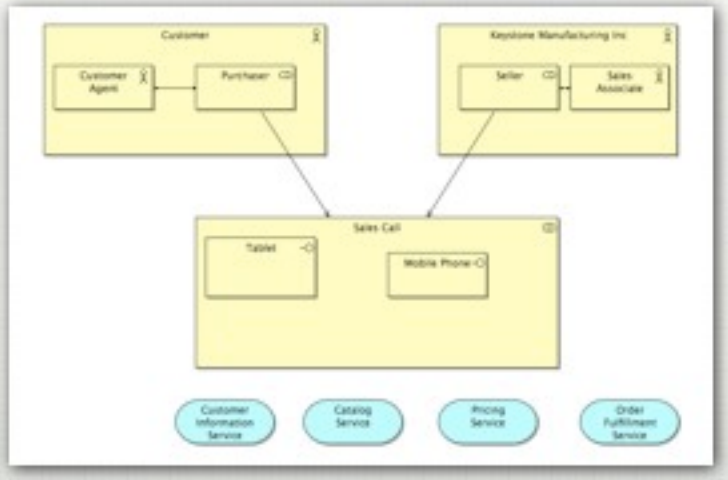
STATEMENT OF ARCHITECTURE WORK

- BASED ON THE BUSINESS SCENARIO AND THE ARCHITECTURE VISION, THE TEAM COMPILES ALL OF THE DELIVERABLES FROM PHASE A INTO A STATEMENT OF ARCHITECTURE WORK
- THE STATEMENT OF ARCHITECTURE WORK CONTAINS A PLAN FOR COMPLETING THE REMAINDER OF THE ARCHITECTURE WORK.
- THE LEAD ARCHITECT PRESENTS THE STATEMENT OF ARCHITECTURE WORK TO THE SPONSOR
- AFTER REVIEW WITH HER PEERS, SHE APPROVES THE STATEMENT OF ARCHITECTURE WORK.

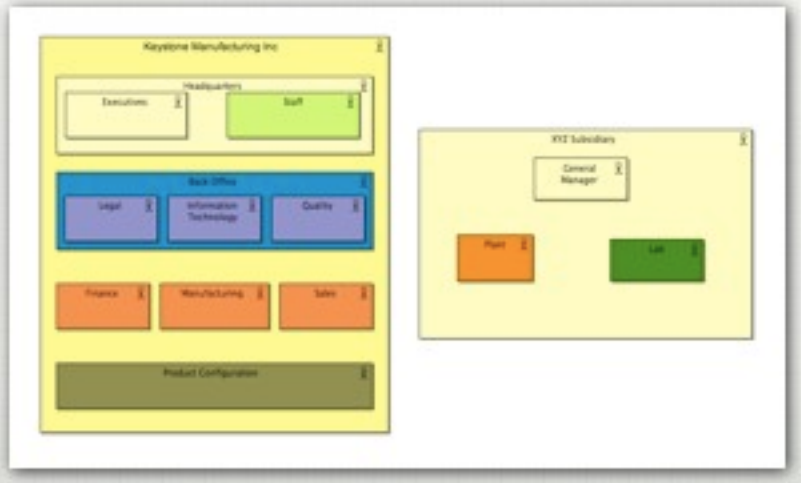
BUSINESS ARCHITECTURE

- OBJECTIVES
  - TO DESCRIBE A DETAILED BASELINE AND TARGET BUSINESS ARCHITECTURE
  - TO DEFINE THE PRODUCT AND/OR SERVICE STRATEGY, AND THE ORGANIZATIONAL, FUNCTIONAL, PROCESS, INFORMATION, AND GEOGRAPHIC ASPECTS OF THE BUSINESS ENVIRONMENT, BASED ON THE ORGANIZATION'S BUSINESS PRINCIPLES, BUSINESS GOALS, AND STRATEGIC DRIVERS

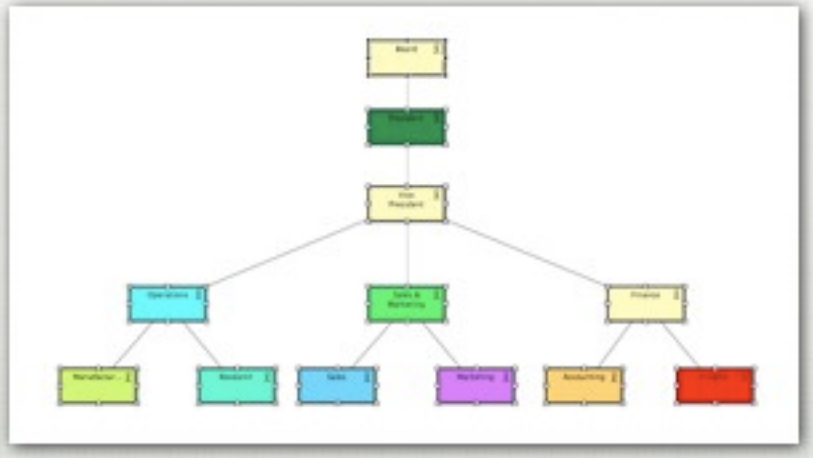
BUSINESS ARCHITECTURE



ORGANIZATION STRUCTURE



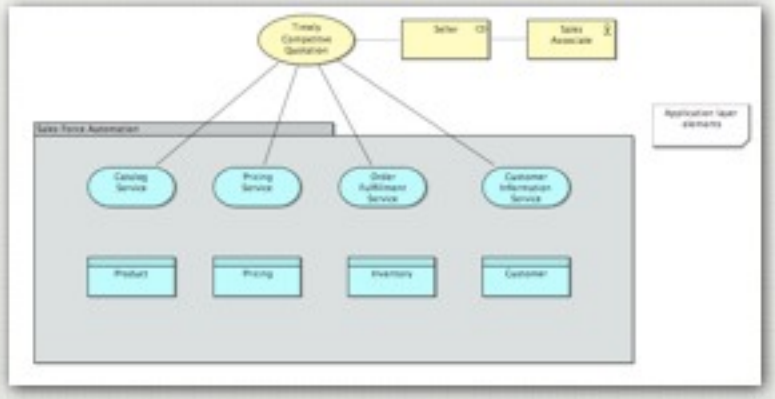
ORGANIZATION CHART



INFORMATION SYSTEMS - APPLICATIONS & DATA

- OBJECTIVES
  - TO DEFINE THE MAJOR KINDS OF APPLICATION SYSTEM NECESSARY TO PROCESS THE DATA AND SUPPORT THE BUSINESS.
  - TO DESCRIBE APPLICATIONS AS LOGICAL GROUPS OF CAPABILITIES THAT MANAGE THE DATA OBJECTS IN THE DATA ARCHITECTURE AND SUPPORT THE BUSINESS FUNCTIONS IN THE BUSINESS ARCHITECTURE.
  - TO DEFINE THE MAJOR TYPES AND SOURCES OF DATA NECESSARY TO SUPPORT THE BUSINESS, IN A WAY THAT IS:
    - UNDERSTANDABLE BY STAKEHOLDERS
    - COMPLETE AND CONSISTENT
    - STABLE
  - TO DEFINE THE DATA ENTITIES RELEVANT TO THE ENTERPRISE, NOT TO DESIGN LOGICAL OR PHYSICAL STORAGE SYSTEMS.

APPLICATION BEHAVIOR

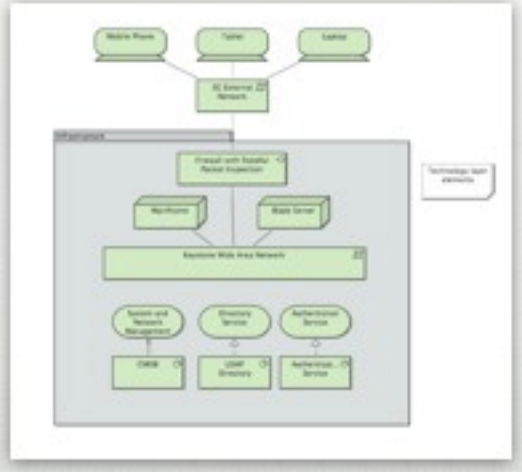


CUSTOMER INFORMATION

TECHNOLOGY ARCHITECTURE

- OBJECTIVES
  - THE TECHNOLOGY ARCHITECTURE MAPS COMPONENTS DEFINED IN THE APPLICATION ARCHITECTURE PHASE ON TO A SET OF TECHNOLOGY COMPONENTS AND SERVICES.
  - TO DEFINE BASELINE AND TARGET VIEWS OF THE TECHNOLOGY PORTFOLIO, DETAILING THE ROADMAP TOWARDS THE TARGET ARCHITECTURE, AND IDENTIFIES KEY WORK PACKAGES IN THE ROADMAP.

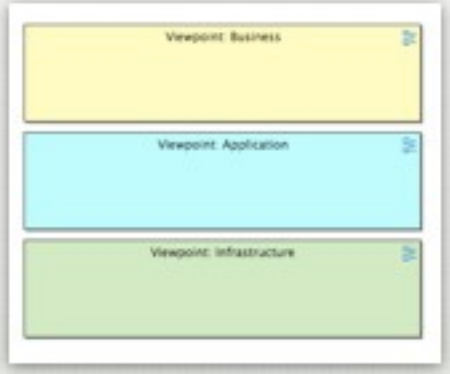
INFRASTRUCTURE DIAGRAM



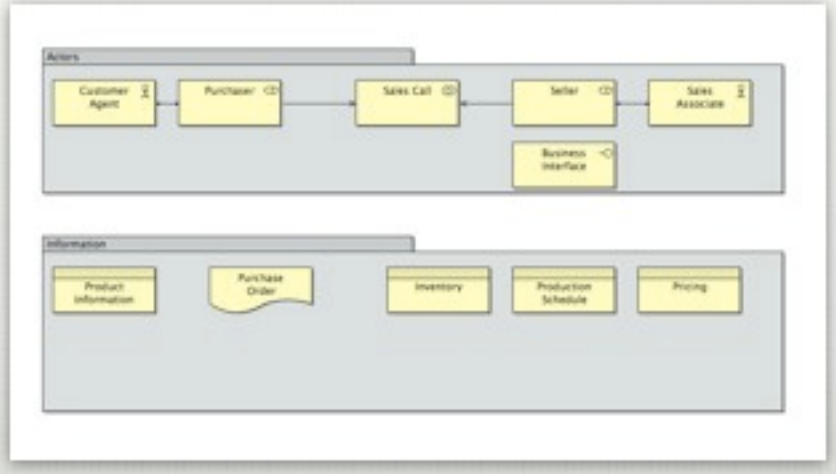
OPPORTUNITIES & SOLUTIONS

- OBJECTIVES
  - TO DEFINE A SOLUTION ARCHITECTURE BASED ON A REVIEW OF THE TARGET BUSINESS OBJECTIVES AND CAPABILITIES, AND A CONSOLIDATED GAPS ANALYSIS FROM PHASES B TO D
  - TO REVIEW AND CONFIRM THE ENTERPRISE'S CURRENT PARAMETERS FOR AND ABILITY TO ABSORB CHANGE
  - TO DERIVE A SERIES OF TRANSITION ARCHITECTURES THAT DELIVER CONTINUOUS BUSINESS VALUE
  - TO GENERATE AND GAIN CONSENSUS ON AN OUTLINE IMPLEMENTATION AND MIGRATION STRATEGY

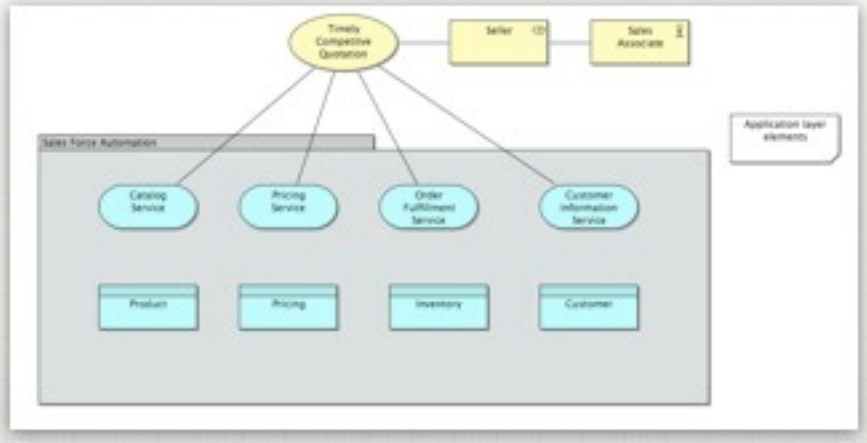
MAP VIEW



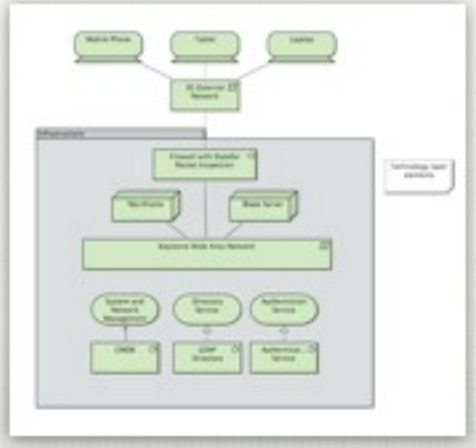
BUSINESS VIEW



APPLICATION VIEW



INFRASTRUCTURE VIEW



MIGRATION PLANNING

- OBJECTIVES
  - TO DEFINE A DETAILED IMPLEMENTATION AND MIGRATION PLAN THAT IS COORDINATED WITH OTHER MANAGEMENT FRAMEWORKS IN USE WITHIN THE ENTERPRISE
  - TO PRIORITIZE ALL WORK PACKAGES, PROJECTS, AND BUILDING BLOCKS BY ASSIGNING BUSINESS VALUE TO EACH AND CONDUCTING A COST/BUSINESS ANALYSIS
  - TO CONFIRM THE TRANSITION ARCHITECTURES DEFINED IN PHASE E WITH RELEVANT STAKEHOLDERS
  - TO SECURE RESOURCES TO ENABLE THE REALIZATION OF THE TRANSITION ARCHITECTURES, AS DEFINED IN PHASE F
  - TO FINALIZE THE ARCHITECTURE DEFINITION DOCUMENTS, IN LINE WITH THE AGREED IMPLEMENTATION APPROACH

IMPLEMENTATION GOVERNANCE

- OBJECTIVES
  - TO FORMULATE RECOMMENDATIONS FOR EACH IMPLEMENTATION PROJECT
  - TO GOVERN AND MANAGE THE OVERALL IMPLEMENTATION AND DEPLOYMENT PROCESS
  - TO PERFORM APPROPRIATE GOVERNANCE FUNCTIONS WHILE THE SOLUTION IS BEING IMPLEMENTED AND DEPLOYED
  - TO ENSURE CONFORMANCE WITH THE DEFINED ARCHITECTURE CONTRACT BY IMPLEMENTATION PROJECTS AND OTHER PROJECTS
  - TO ENSURE THAT THE PROGRAM OF SOLUTIONS IS DEPLOYED SUCCESSFULLY, AS A PLANNED PROGRAM OF WORK

ARCHITECTURE CHANGE MANAGEMENT

- OBJECTIVES
  - TO ENSURE THAT BASELINE ARCHITECTURES CONTINUE TO BE FIT-FOR-PURPOSE
  - TO ASSESS THE PERFORMANCE OF THE ARCHITECTURE AND MAKE RECOMMENDATIONS FOR CHANGE
  - TO ASSESS CHANGES TO THE FRAMEWORK AND PRINCIPLES SET UP IN PREVIOUS PHASES
  - TO ESTABLISH AN ARCHITECTURE CHANGE MANAGEMENT PROCESS FOR THE NEW ENTERPRISE ARCHITECTURE BASELINE THAT IS ACHIEVED WITH COMPLETION OF PHASE G
  - TO MAXIMIZE THE BUSINESS VALUE FROM THE ARCHITECTURE AND ONGOING OPERATIONS
  - TO OPERATE THE GOVERNANCE FRAMEWORK

SUMMARY

- IN THIS PRESENTATION, WE HAVE REVIEWED FUNDAMENTAL IDEAS RELATED TO TOGAF 9 BUILDING BLOCK MODELING
- WE HAVE PRESENTED A REVISED EXAMPLE OF BUILDING BLOCK MODELING
- TOGAF NEEDS MORE GOOD EXAMPLES OF THE TECHNIQUES IT DESCRIBES
- THIS WORK IS THE BASIS FOR FUTURE WORK THAT WILL ILLUMINATE THE TECHNIQUES FOR ARCHITECTURE MODELING IN ALL DOMAINS

QUESTIONS - COMMENTS

TUSEN TAK!