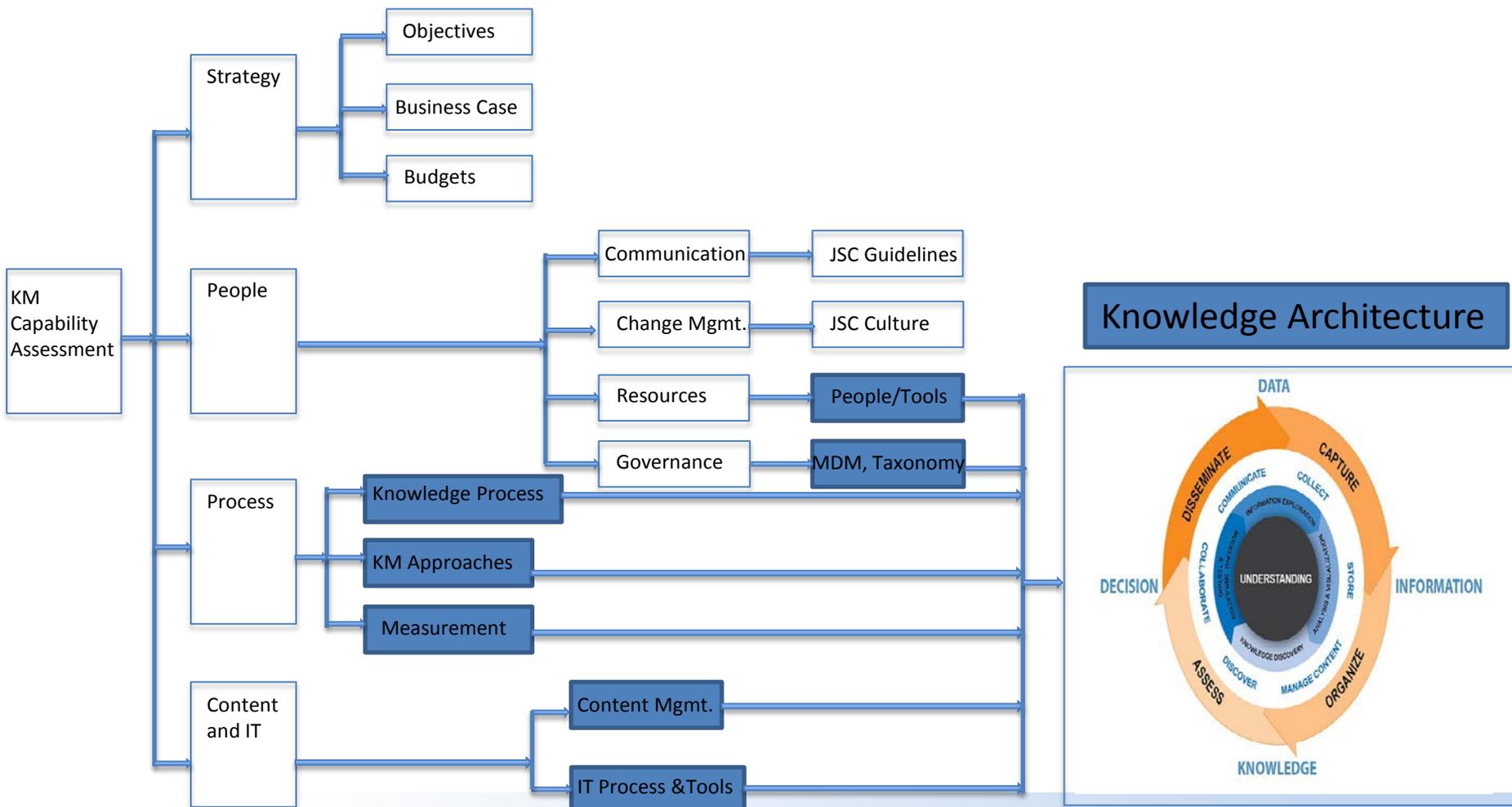**Office of the**
CHIEF KNOWLEDGE OFFICER

JSC KM Strategy

JSC KNOWLEDGE MANAGEMENT STRATEGY

KNOWLEDGE ARCHITECTURE – KNOWLEDGE MANAGEMENT AND INFORMATION ARCHITECTURE

Source → **Data Acquisition & Creation** → **Data Management** → **Data Warehousing** → **Data Analytics, BI (Knowledge Extraction)** → **Knowledge Presentation and Visualization** → **User**

Data Acquisition & Creation

Sources:
- Sensor
- Experimental
- Computed (modeling & simulation)

Forms:
- Digital
- Text
- Visual

Organization:
- Structured
- Semi-Structured
- Unstructured

Data Management

Functions:
- Governance
- Taxonomy
- Ontology
- Comm. Plan
- Operations Management
- Security
- Master Data Management
- Content Management
- Metadata
- Data Quality

Data Warehousing

Tools & Environments:
- Large scale storage
- RDBMS
- Parallel RDBMS
- NOSQL
- Hadoop

Organization:
- Structured
- Semi-Structured
- Unstructured

Data Analytics, BI (Knowledge Extraction)

Tools & Environments:
- Computation & data access
- Data Mining
- Text Mining
- Optimization
- Net Algorithm
- New Algorithm
- Visualization

Access Pattern:
- Structured
- Semi-Structured
- Unstructured
- Predictable
- Unpredictable

Knowledge Presentation and Visualization

Data Products:
- Predictions
- Models
- Visualizations
- Decision Analysis
- Wiki
- Search

Security, Data Quality, Workflow Management, Data Management, Resource Management

IT & Intellectual Infrastructure

WHAT IS KNOWLEDGE ARCHITECTURE

The people, processes, and technology of designing, implementing, and applying the intellectual infrastructure of organizations.

What is an intellectual infrastructure?

- The poor neglected cousin of technology and organizational infrastructures
- It is just the set of activities that deal with creating, capturing, organizing, visualizing, presenting, utilizing, understanding, the information part of the information age.

CHIEF KNOWLEDGE ARCHITECT

Work with Chief Knowledge Officer

> Build a Knowledge Culture

> Advocate, Evangelize

Design & lead integration of all the elements of the Intellectual infrastructure of the Enterprise

Design measurement and analytics of KM in organization

Define and lead the KA Team

Research New Ideas and Technologies

> Personas, Stories, Semantic Web and RDF, Cognitive Anthropology, Complexity Theory

STRATEGY

- Objectives
- Budgets

PEOPLE

- Communication
  - JSC Guidelines
- Change Management
  - JSC Culture
- Resources
  - People/Tools
- Governance
  - Master Data Management, Taxonomy/Ontology

PROCESSES

- Knowledge Process - OLP
- KM Approaches, oral histories, case studies, enhanced search, videos, gamification, data analysis, road shows, working groups, communities, expert finder, lesson learn
- Measurement – PUMP training

CONTENT & INFORMATION TECHNOLOGY

- Content Management
- IT Processes and Tools
  - Intellectual Infrastructure - set of activities for creating, capturing, organizing, visualizing, presenting, utilizing, and understanding, the information part of the information age.

FY 16 FORWARD WORK

- Data Science skill sets
- Data Management Governance
  - Master Data Management plan
    - Newly created data
    - Legacy data
  - Metadata criteria
  - Operations Management of data
  - Security coordination with OCIO
- JSC referee program
- Findability
  - Natural Language Query
- Communication Plan
  - Embed KM culture in programs and projects

QUESTIONS?

JSC KNOWLEDGE MANAGEMENT STRATEGY

Strategy

- Business Case
  - Objectives
  - Budgets
- People
  - Communication — JSC Guidelines
  - Change Mgmt. — JSC Culture
  - Resources — People/Tools
  - Governance — MDM, Taxonomy
- Process
  - Knowledge Process
  - KM Approaches
  - Measurement
- Content and IT
  - Content Mgmt.
  - IT Process &Tools

Knowledge Architecture