

Optimizing Information Management To Connect People To Information and Expertise

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Marathon Statistics at a Glance



- Fortune 50 company
- Established in 1887
- 4th largest US integrated oil & gas company
- 5th largest US refiner
- Market Cap: ~ \$20 billion
- 2009 Revenues: \$54 billion
- 2009 Net income: \$1.46 billion
- 2009 Net Oil & Gas Production Sold: 407,000 BOE/D
- 2009 Net Synthetic Crude Oil Sold: 32,000 BPD
- 2009 Net Proved Reserves: 1.679 billion barrels
- Employees: ~30,000
- Headquartered in Houston, Texas

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Marathon's Business Segments



Integrated Gas



Exploration & Production



Refining, Marketing & Transportation

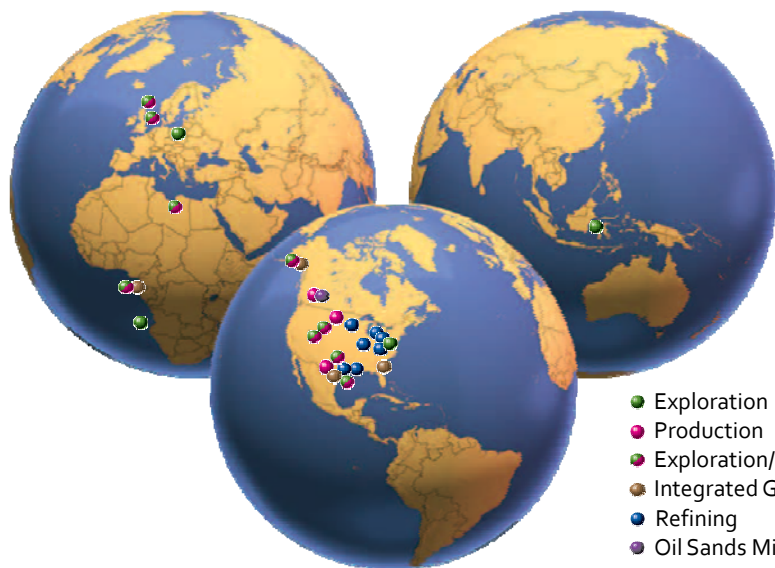


Oil Sands Mining

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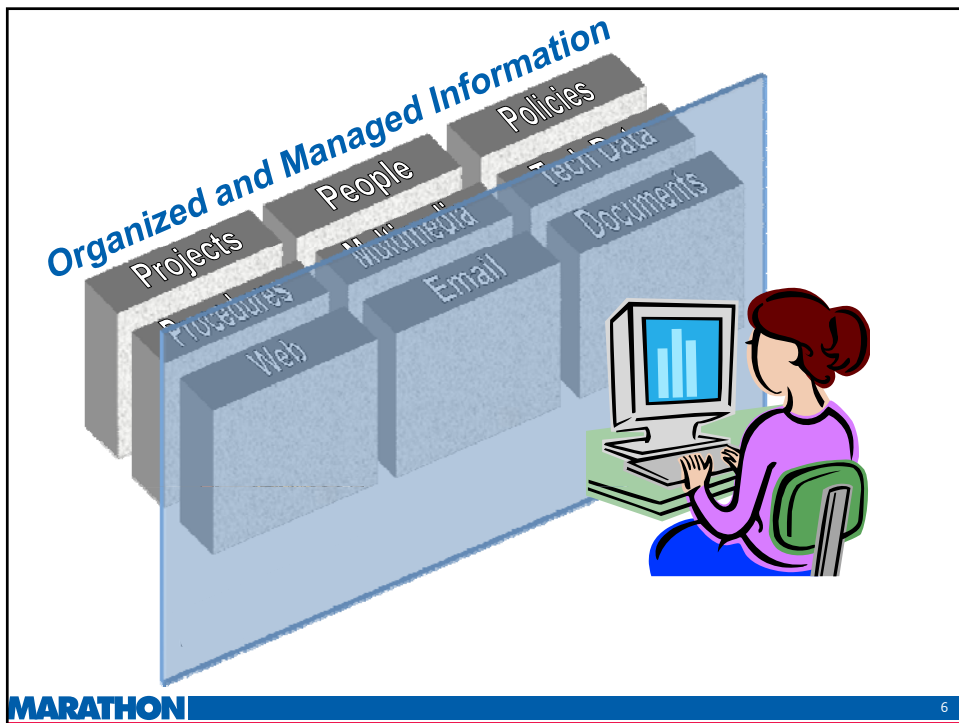
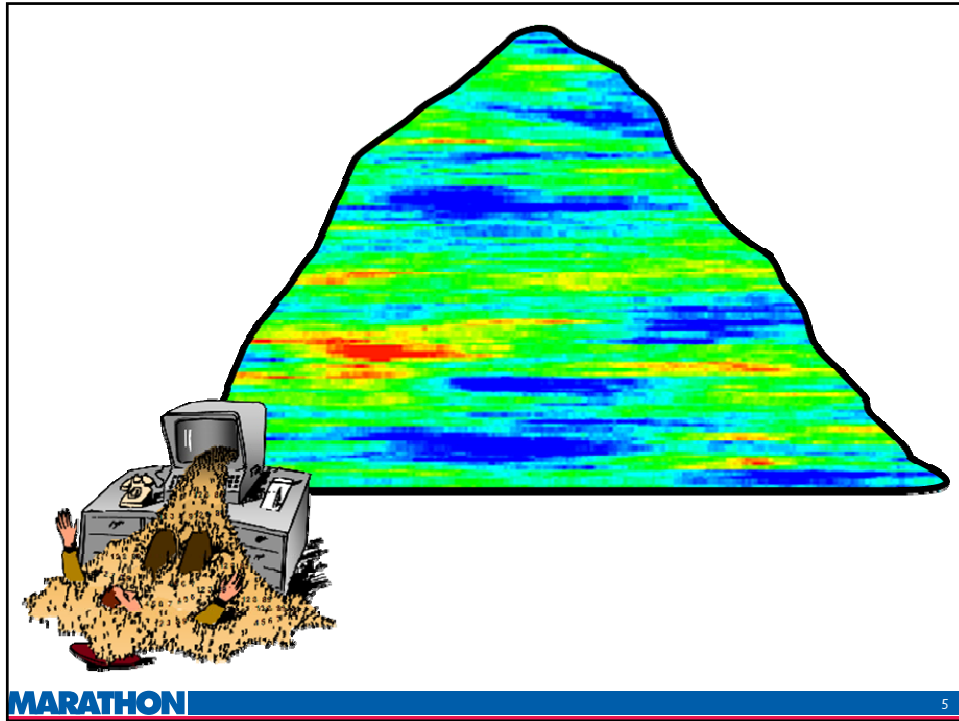
Global Operations



- Exploration
- Production
- Exploration/Production
- Integrated Gas
- Refining
- Oil Sands Mining

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Knowledge & Information Management Scope

■ Information Channels

- Electronic & Physical
- Email
- Instant Message
- Web (Intranet & Internet)
 - Collaboration & Social Media: blog, wiki, discussion, ...
 - Content Types: video, webcast, podcast, RSS, ...
- File Shares / PCs ... "unstructured"
- Applications ... "structured"

■ Information Types

- Policies & Standards
- Daily Market Assessment
- Jobber Contracts
- Interpreted Log Curves
- Pipe Line Operating Procedures
- Refinery Process Safety Management Documents
- Reserves Estimates
- Reservoir Models
- Trading Deals
- People Profiles
- Best Practices
- Lessons Learned
- ...



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Motivation

■ Business Drivers

- Productivity
- Decision Quality
- Cycle Time
- Cost
- Consistency
- Collaboration
- ...

■ Risk Mitigation

- Operational
- Technical
- Financial
- Safety
- Environmental
- Regulatory
- Legal
- Security
- ...

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Security

■ Confidentiality, Integrity, Availability

■ Standards

- NIST
 - Standards for Security Categorization of Federal Information and Information Systems, National Institute of Science and Technology, FIPS PUB 199, February 2004
- American Petroleum Institute
 - API IT Security Forum, May 2009

■ Challenges

- Balancing the tension between “knowledge sharing” and “need to know”
- Sustainability as organizations and technologies change

Engaging on multiple fronts

■ Scope

- Policies
- Roles & Responsibilities
- Processes
- Technology
- Ongoing Support

■ Stakeholders

- Business
- Law
- HR
- Internal Audit
- Finance
- Public Affairs
- IT
- ...

Examples of Marathon Systems

- **MaraView** – Enterprise Information & Records Management
- **ViewPoint** – Data Dashboards
- **MIDAS** – Well headers
- **PWE/Recall** – Well Logs
- **MaraGIS** – Data Mining
- **Technical Information Center** – Physical Records

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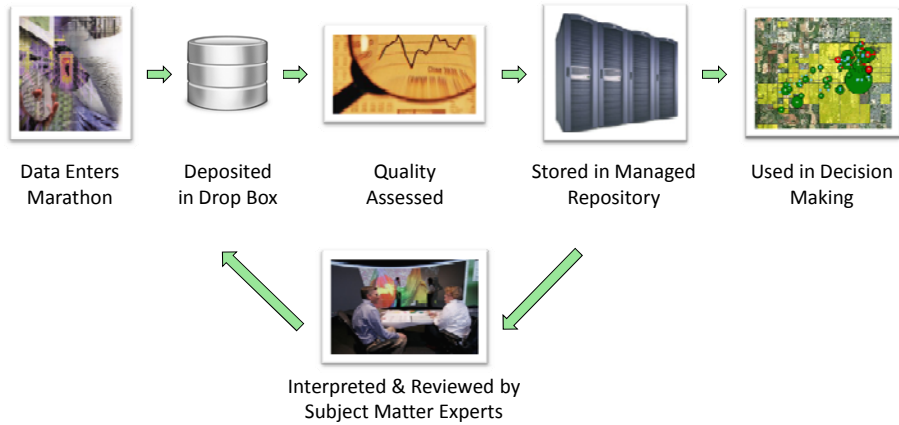
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The screenshot displays the MaraView web application interface. At the top, there is a user profile for William Smith, Head of HR, with navigation links for Home, My Links, and Help. A search bar is also present. The main content area is divided into several sections:

- Channels:** A sidebar on the left lists various channels such as Business Expenses, Business Integrity, Corporate Policies, Diversity, HESAS, MarLearn, HConnect, myMarathonBenefits.com, My Career, My Performance, OurEnergyVoice.com, People Search, SAP Online Services, Service Desk, Software Catalog, Think Plan - Fidelity, Travel, and Wellness. Below this is a 'Tools' section with links for Submit New Article and Submit Improvement.
- Spotlight:** A featured article titled 'New MaraLearn Training Program: The Power of i' with a 'Read More' link.
- Company:** A section with several articles:
 - New Email Anti-Spoofing Service:** A new feature on April 15 to strengthen email security.
 - Venture:** Garyville Major Expansion featured in latest Marathon Venture.
 - Join The Fight!** Speedway SuperAmerica launches 'Fight Swipe Fees' petition campaign.
 - Preventive Law News - 1st Quarter Preventive Law Newsletter:** In the Feature Article, Tim Berry, General Attorney, writes about the internal resources available to help assist with questions related to copyrights, patents, trademarks and trade secrets.
 - Capitalizing on our Knowledge - Knowledge Management Connects People-to-People and People-to-Knowledge:** This is the fourth in a series of articles on Marathon's Upstream Technical Excellence Group.
 - Employee Update on Health Care Reform:** Patient health care reform legislation has been passed by Congress and signed into law by President Obama over the past few days.
 - 2009 Living Our Values Awards Winners Announced:** Congratulations to the many employees, organizations, contractors and suppliers who were recognized from more than 107 nominations.
 - Marathon Response to EPA Endangerment Finding:** The U.S. Environmental Protection Agency (EPA) recently issued a finding declaring that greenhouse gases (GHGs) endanger public health. Having issued such a finding, the EPA is now prepared to undertake regulation of GHGs under the U.S. Clean Air Act.
- Industry:**
 - API SmartBrief 04/07/10:** "Terminal rack" tax is proposed for climate bill.
 - Morning Markets April 7:** (Link to market data).
- The Markets:** A section displaying various market data points:
 - WTI 55.89 (-0.95)
 - Brent 55.30 (-0.80)
 - Heavy Hub 4.019 (-0.077)
 - 3-2-1 Crack Spread 10.34 (-0.33)
 - LLS 6-3-2-1 Crack Spreads
 - Chicago 4.25 (-0.43)
 - Gulf Coast 2.38 (-0.40)
- Events:** A section stating 'There are no current events to display at this time.'
- Snapshot:** A section with a photo of an oil rig and text describing Marathon's significant position in the Bakken play in North Dakota and Montana.
- Did You Know...:** A section titled '3-2-1 Crack Spread' explaining the average 'cracking' refinery gross margin reported in US\$/bbl of crude oil.

Subsurface Well Data Workflow

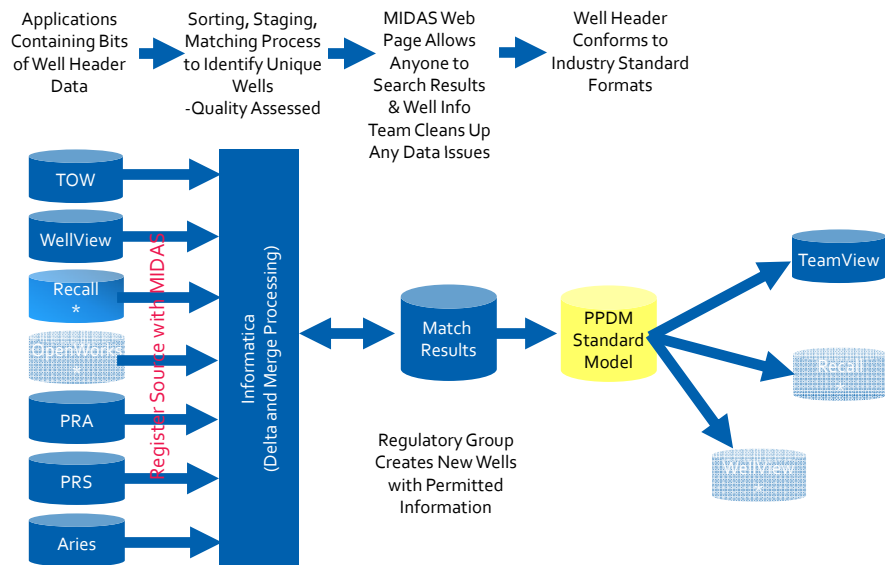
Future State Facilitates Collaboration Between Disciplines & Within Teams



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MIDAS Well Header Database – Workflow



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MIDAS Well Master

Well
Application Cross Reference
Audit
Language
Alias

Advanced Search Parameters

(Hide Details...)

Well Name:

Government ID:

Platform:

Operator:

Formation:

Country:

Division:

Sub Division:

Field:

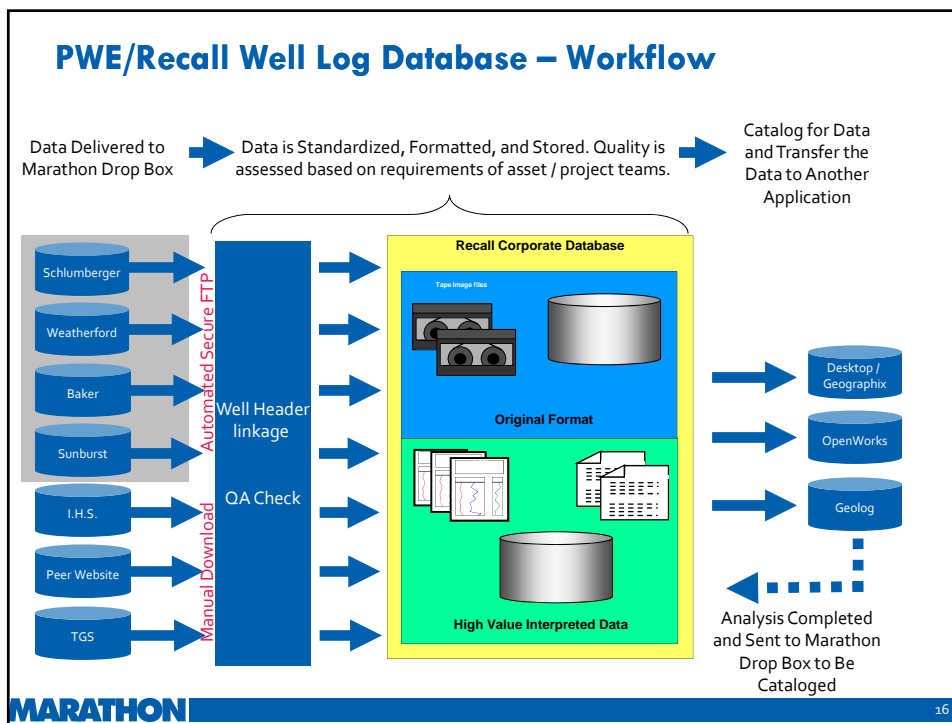
Validated:

Search

Total Well Records: 13

| | UWI | Validated | Well Name | Operator | Operated Status | Surface Latitude | Surface Longitude | Bottom Hole Latitude | Bottom Hole Longitude | Geodetic Datum | Final TD | UOM | C |
|---|------------|-----------|-----------------------|----------------------|-----------------|------------------|-------------------|----------------------|-----------------------|----------------|----------|------|------|
| + | M-24299729 | Y | GC_244_2_ST00BP00 | MARATHON OIL COMPANY | MOC | 27.725596 | -90.730865 | 27.724471 | -90.731709 | NAD27 | 21190 | FEET | UNIT |
| + | M-24302452 | Y | GC_244_1_ST00BP00 | MARATHON OIL COMPANY | MOC | 27.745663 | -90.731046 | 27.741717 | -90.726925 | NAD27 | 16212 | FEET | UNIT |
| + | M-24304219 | Y | GC_244_3_ST00BP00 | MARATHON OIL COMPANY | MOC | 27.725501 | -90.730933 | | | NAD27 | 23012 | FEET | UNIT |
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| + | M-24437050 | Y | GC_244_3_ST01BP00 | MARATHON OIL COMPANY | MOC | 27.725501 | -90.730833 | | | NAD27 | 20772 | FEET | UNIT |

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PWE/Recall Well Log Database

Digital Logs

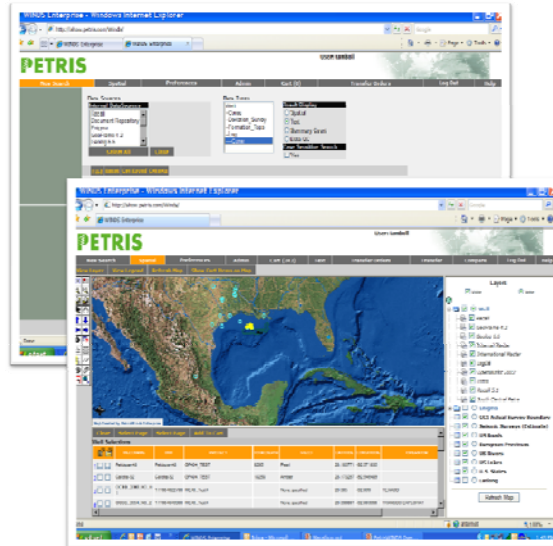
- Raw
- Compositing
- Final interpreted data sets
- Depth Calibrated
- Scanned
- Thin Section Photos

Drilling Data

- Mud logs
- Dipmeter

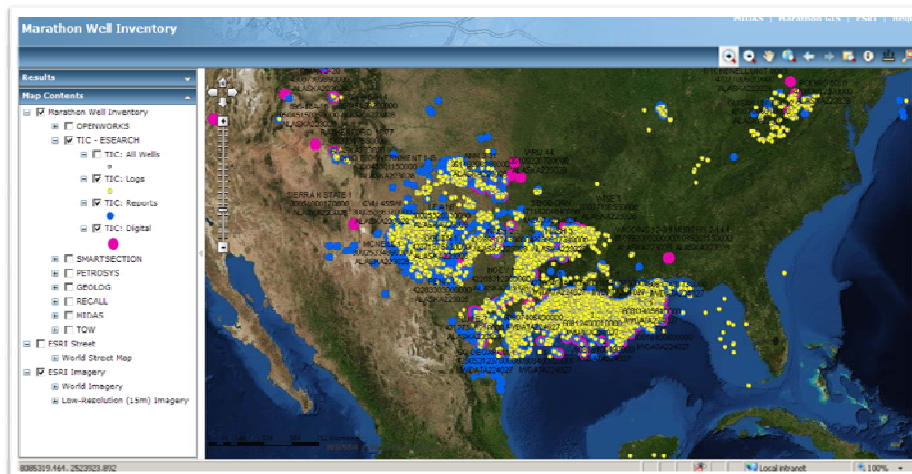
Pressure Data

- Wireline
- RFT
- MDT

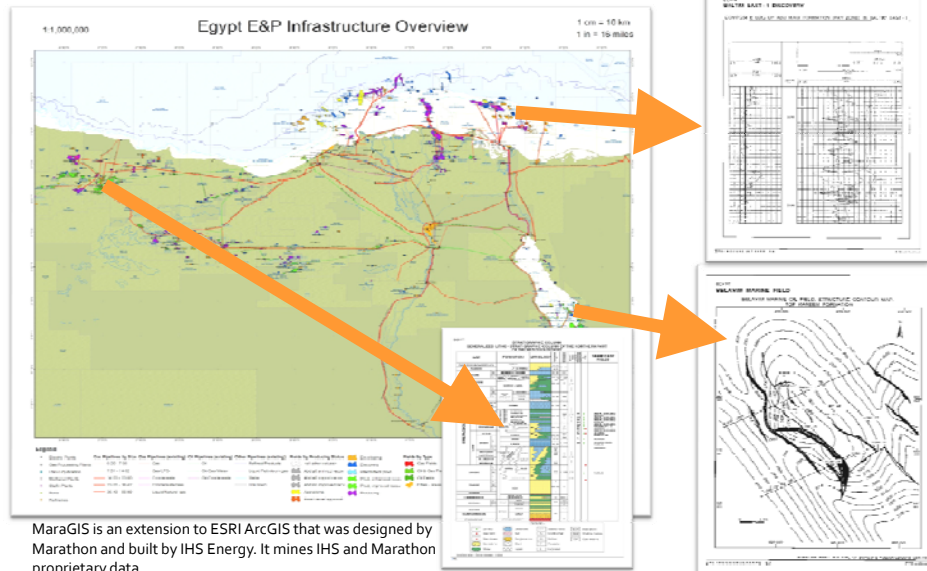


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MaraGIS – Data Mining



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Technical Information Center

IHS Data Management Specialists managing Marathon Physical Petrotechnical Records



Roles and Responsibilities

- Design & implement effective systems for maintenance, protection & disposition of technical records
- Establish filing procedures, and determine standards for data entry
- Store and maintain technical data using established procedures and business rules
- Maintain database integrity through accurate inventories, timely data entry, retrieval and refiling
- Coordinate the transfer and retrieval of technical data to and from offsite storage
- Maintain inventories of data stored in multiple locations with multiple vendors
- Coordinate destruction of records in accordance with Marathon's records retention schedule

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State of Information Management at Marathon

■ Policies, Standards, Procedures

- Enterprise Records & Information Management Policy
- Information Classification Standard

■ Roles & Responsibilities

- Executive Sponsors, Information Champions
- Asset Data Stewards, TeamView Editors, Records Coordinators, IT Analysts

■ Processes

- Classification, Migration, Data Handling, Offsite Storage, eDiscovery

■ Technology

- Knowledge Connections: people to information and people to people
- Ongoing performance improvement & system integration
- Hold Order Management, eDiscovery

■ Ongoing Support

- Training, Help Desk, Compliance Readiness Assessments, Physical Records Management

Guiding Principles

- Information must be managed as an asset
- Relevant, up-to-date and trusted information offers maximum value
- Standardized processes and technology offer significant benefits
- Embed legal and regulatory compliance in business processes
- Support spans processes and technology
- Individual ownership and accountability are necessary for success

