# AME/APQC Benchmarking CoP Virtual Networking Event June 7, 2011

Knowledge Management at Rockwell Collins, Inc.

Lynda Braksiek, Manager, Knowledge & Critical Skills Management Mike Gries, Manager, Knowledge & Process Development

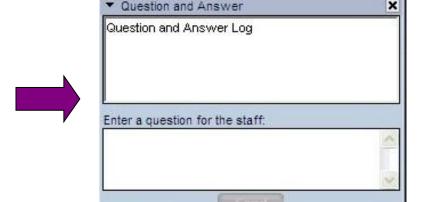
Rockwell Collins, Inc.



# Housekeeping

All lines are muted.

You can submit questions/comments at any time. We will address all questions during the Q&A session at the end of today's presentation.



- Links to the slides and recording will be made available and sent to all attendees via e-mail.
- Follow-up survey to provide more feedback.



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Rockwell Collins, Inc.



# Session Agenda

10:00 a.m. Welcome/Housekeeping

10:05 CoP Business

10:10 Benchmarking Presentation

10:45 Open Q&A

11:00 Adjourn



# 2011 Benchmarking CoP Calendar

Month	Session Information	Status
January	Cost Factors Considered When Locating Manufacturing Facilities	Complete
February	Supplier Relationship Management Research Findings	Complete
March	AME Award Winner Showcase: DJO Global, Inc.	Complete
April	AME Award Winner Showcase: Parker Hannifin Hydraulic Filter Division	Complete
June	Knowledge Management at Rockwell Collins, Inc.	Underway
July	Effective Benchmarking vs. Industrial Tourism (Glenn Marshall)	July 26th
August	AME Award Winner Showcase	TBD
September	AME Award Winner Showcase	TBD
October	Face-to-Face BCoP meeting at AME National Conference	TBD
November	AME Award Winner Showcase	TBD
December	AME Award Winner Showcase	TBD



# AME Events (www.ame.org)

- 04/28 04/29 San Antonio, Texas
  - Managing a Lean Efficient Supply Chain
- > 06/06 06/09 Calgary
  - Measure Up For Success Conference 2011
- O6/07 Clear Lake, South Dakota
  - Quick and Easy Kaizen: Not Just Another Suggestion System
- 06/13 Tobyhanna, Pennsylvania
  - Policy Deployment-the Key to Execution
- 06/14 06/15 Apple Valley, California
  - Leader Powered Lean: Heartbeat Leaders First
- 06/14 Monee, Illinois
  - Lean Safety Workshop
- 06/15 Jacksonville, Florida
  - Jim Womack: Gemba Walks
- > 06/17 Philadelphia, Pennsylvania
  - Innovation Best Practices to Accelerate Growth in Your Business
- > 06/21 06/23 Pensacola Beach, Florida
  - Accounting for Lean Enterprise
- ➤ 06/28 Metamora, Ohio
  - Lean in a High-Mix Environment



# **APQC** Events

- Upcoming Benchmarking Projects
  - Engagement and Participation for Knowledge Sharing and Collaboration
  - Supplier Category Management: Driving Value Through the Procurement Organization
  - Harnessing Enterprise Quality Measurement to Create Business
     Value
  - Improving the Transfer of Knowledge in Product Development
  - Scientific and Technical Talent Management
- More Information
  - http://www.apqc.org/best-practice-studies



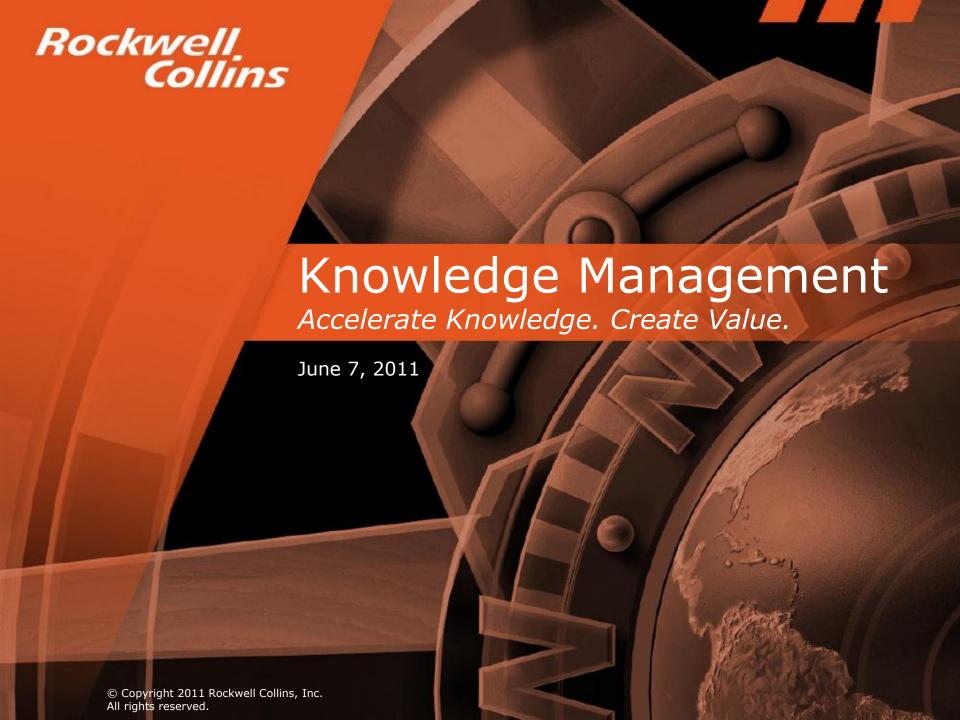
# Benchmarking Presentation Knowledge Management at Rockwell Collins, Inc.

Lynda Braksiek, Manager, Knowledge & Critical Skills Management Mike Gries, Manager, Knowledge & Process Development

All lines are muted. Please send your questions via chat to the <u>Organizer</u>. We'll cover them at the end of this session.

We <u>WILL</u> send out slides and a link to the recording of the event in the coming days.







# Agenda

- Rockwell Collins Introduction
- Our KM Journey
- A Little Help From Our Friends
- Assessment
- Revitalization
- Where Are We Now?
- Era of Adoption
- Measures
- Success



### Rockwell Collins at a Glance

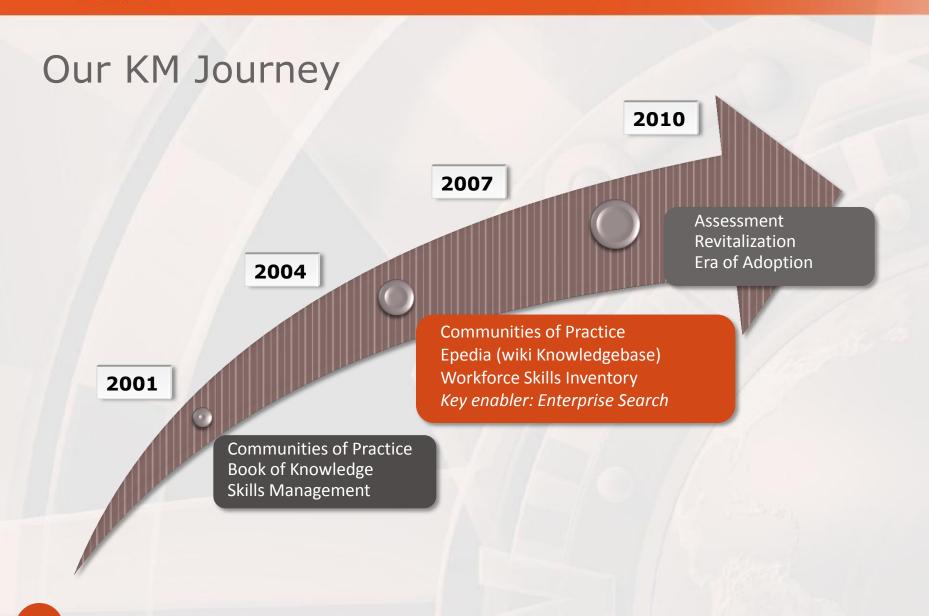
- Creating the most trusted source of communication and aviation electronic solutions.
- 20,000 Employees Globally North America, Europe, Brazil, Russia, India, China
- \$4.8 Billion in Sales
- Recently Named to DiversityInc Top 50 list
- Rockwell Collins-brand aircraft electronics are installed in the cockpits of nearly every
  airline in the world and its airborne and ground-based communication systems transmit
  nearly 70 percent of all U.S. and allied military airborne communication.
- Established **24/7 global service and support** capability, more than 80 worldwide locations and more than 3,200 dedicated employees, we offer Original Equipment Manufacturers with quality service, logistics and field support.
- Rockwell Collins is focused on leveraging its core strengths and expanding them through acquisitions and alliances to provide new capabilities to its current and future customers.
- The company is well-positioned for the future with significant avionics content on the Boeing 787 Dreamliner and the Airbus A350XWB. In addition, the company is expanding its military offering to the ground market while continuing to be a leader in providing aviation solutions across domains.



# Rockwell Collins at a Glance









# A Little Help From Our Friends

### Our KM Program is About Partnership

#### APQC

- KM CAT (Knowledge Management Capability Assessment Tool)
- Visioning Workshop
- KM Measures
- Advanced Working Group
- Sponsors and Partners for KM Research

#### Rockwell Collins

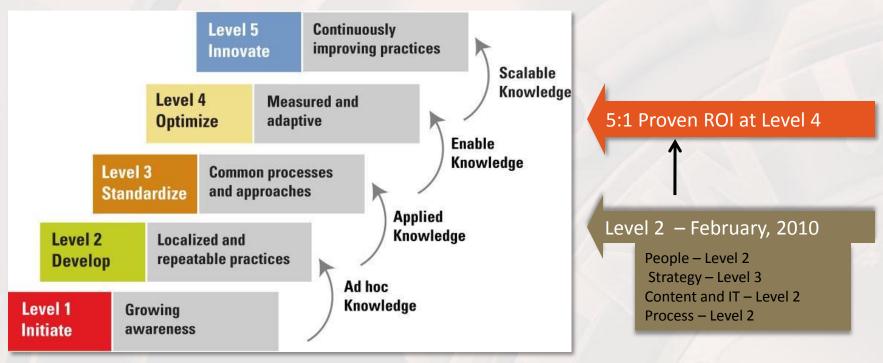
- Rockwell Collins University, Expertise Location, Mentoring (Human Resources)
- Sharepoint, Enterprise Search (Information Technology)
- Social Media, Strategic Communication Efforts (Corporate Communications)

#### Customers/Partners

 Learn from those we work with and for. Standardization and common thinking create better solutions. Better for KM team, Better for our company's bottom line.



## **KM Assessment Results**



APQC'S Stages of Knowledge Management Maturity™

#### Rockwell Collins Key Opportunities for Improvement to Reach Level 3

- KM focus areas are aligned with business strategies and critical success factors (Relationships and Alignment)
- KM methods and tools are available to knowledge workers on demand (Collaboration and Coaching)
- Standardized taxonomies for classifying core knowledge assets exist (Search)
- Business critical success factors (CSF) and key performance indicators are identified (Measurement)



### Revitalization

A Renewed Vision of Knowledge Management at Rockwell Collins

### **VISION**

Accelerate Knowledge. Create Value.

### **MISSION**

A ccess: Provide the ability to get what I need to do my job better

**Connect**: Foster collaboration and innovation through a portfolio of standard services and tools

**Transcend**: Enable a seamless knowledge exchange with no boundaries

### GOALS

- Connect people to people
- Build a global and Inclusive knowledge sharing environment
- Make knowledge integrated, simple, relevant and flexible
- Create, capture, use and reuse knowledge

### STRATEGIC FRAMEWORK

- Communication
- Knowledge flows on the natural path
- Improve and sustain through lean
- Measures tie to business value



### Where Are We Now?

### **Knowledge Sharing**

- Communities of Practice (CoPs)
- Epedia (wiki) The Engineering Encyclopedia
- Critical Skills Management and Expertise Location
- Phase Retirement Plans
- Enterprise Search A Partnership with IT
- Research Center
- Comprehensive Communication Plan
- Change Management

### **Reward and Recognize**

- Engineer of the Year Corporate Award Program
- Summer Engineering Project Program (SEPP)
- Annual Engineering Directors' Summit
- Executive Engineer/Dual Degree Masters Program
- Directed Match Mentoring

### **Education & Skill Development**

- School of Engineering
- Project Management Education/Certification
- Systems Engineering Education/Certification
- Executive Engineering/Dual Degree
- Engineering New Hire Orientation
- Recruitment Events
- Lean Facilitation and Training
- Workplace Coaching



# Era of Adoption

Shifting our Focus - Individual KM Practices and Technology to Communication, Education and Coaching.

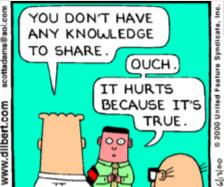
### We Discovered:

- People ARE NOT using KM tools and practices because they don't know they exist, they don't know how, and they don't understand the value TO THEM!
- Too many people, moving too quickly to meet deadlines that seem impossible. No time to focus on learning something new.
- We are too close to the solutions, and are making assumptions everyone is aware and understands. "If you build it, they will come" mentality.

### • What do we do about it?

- It's NOT just about the tools, it's about changing behavior and making it relevant.
- Communicate in order to drive demand. Pull vs Push.
- Educate by coaching, not by telling. Formal training is good for mechanics, not adoption.
   Focus on informal learning opportunities and leveraging our networks.
- Measure KM above and in the flow to show true business value.
- Practice what we preach!









# Communicate and Change Behavior

#### • Purpose:

- Create Awareness and Desire
- Education and Teach Employees "How", give them the knowledge they need
- Develop Agents of Change and Coaches, help them apply the knowledge they seek
- Help sustain a knowledge sharing environment

#### Delivery Methods:

- Traditional: Newsletter Articles, Weekly Enterprise Communications, Flyers, RC Company Magazine
- Existing Channels: CoPs, Employee Networks, Internal Conferences, Staff Meetings, workplace coaching



### **Communication Results in Record Metrics in June for Enterprise Search**

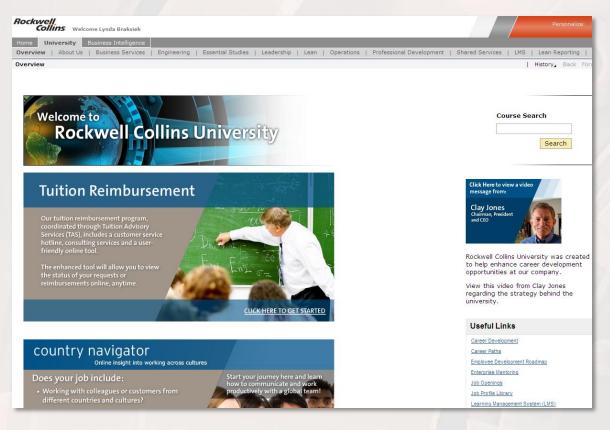
 A +20% increase in Enterprise Search usage was reported following demonstrations delivered to 12 Community of Practice meetings throughout May. The biggest increase was in the use of PDM (Product Data Management) searches among Engineering users.

U.S. government shutdown averted

· dPAVES IFE system selected by two international airlines



# Creating a Learning Organization Formal Training



### Rockwell Collins University

- Mirrors University Model
- Governed by Learning Council
   Made Up of Five Schools
- Internal Development
- External Off-the-shelf Course Offerings
- Internal Course Offerings
- Mentoring Program

### Delivery Methods

- External Classes
- External Instructors on-site
- University Led
- Internal SME Led
- Computer Based Training
- Virtual Training



# Creating a Learning Organization

Workplace Coaching /Just-in Time Training

### **RC Challenges:**

- Global Market
- Size and Complexity of Programs
- RC Competency Shift

### **Workplace Coaching Services:**

- Lean Education and Facilitation
- Skilled Modeling Workshops
- Wiki Facilitation and Education
- Lessons Learned Facilitation and Education
- Focus Groups, Surveys, and Feedback
- Sharepoint Education
- Engineering Non-Advocacy
   Reviews
- Communication plans
- Social Media Uses and Education
- People Change Management





# Measure Our Progress Above the Flow

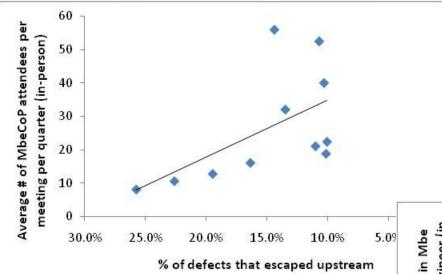
- Start by measuring KM activities above the flow of our process – show relevancy, impact and value.
- Include hard measures such as number of participants, knowledge articles, courses offered and requests for workplace coaching.
- Report customer satisfaction and successes through storytelling, surveys, and interviews.
- Begin to quantify soft measures.

Knowledge Management Scorecard						
Service	Activity	Measure				
Programs	Engineer of the Year SEPP	% Complete Customer Satisfaction % Complete Customer Satisfaction				
	Engineering Summit	% Complete Customer Satisfaction				
	School of Engineering:	Customer Satisfaction ILT Customer Satisfaction CBT				
	Development	% Complete New Requests				
Learning	Offerings	Completed ILT Completed CBT New Requests # Classes Backlog Demand ILT Customer Satisfaction CBT Customer Satisfaction				
	Budget	Variance to Forecast				
	Academies	Participation level Courses created/modified				
	Dual Degree	Customer Satisfaction				
	New Hire Orientation	Sessions % Participation % Customer Satisfaction				
	KM Maturity	KM CAT Level				
	CoPs	Participation Customer Satisfaction Value				
Knowledge	Epedia Knowledge Base	Number of Visits Avg Monthly Unique Users Number of Articles Customer Satisfaction				
Sharing	Lessons Learned	Contributions				
	Research Center	Views Requests				
	eSearch	Utilization Customer Satisfaction				
	Workplace Coaching	Requests Received Requests Fulfilled ~ Number of Hours				



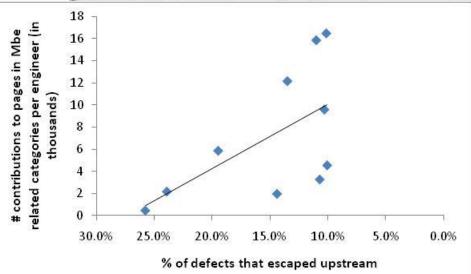
# Measure Our Progress

In the Flow



#### Approach:

- Due to incomplete data, we will continue to collect for two years to show correlations of KM activities to real business measures
- Incorporate into Engineering Scorecard in fiscal year 2013





### Success

### Changing Behavior Through Communication, Education, Coaching

#### VISION

Accelerate Knowledge. Create Value.

#### MISSION

A ccess: Provide the ability to get what I need to do my job better

Connect: Foster collaboration and innovation through a portfolio of standard services and tools

**Transcend**: Enable a seamless knowledge exchange with no boundaries

#### **GOALS**

- Connect people to people
- Build a global and Inclusive knowledge sharing environment
- Make knowledge integrated, simple, relevant and flexible
- Create, capture, use and reuse knowledge

#### STRATEGIC FRAMEWORK

- Communication
- Knowledge flows on the natural path
- Improve and sustain through lean
- Measures tie to business value

#### Keys to Success:

- Build Relationships
- Coach
- Make it Relevant, Impactful and Valuable
- Solicit Feedback
- Collect Stories
- Communicate
- Partner
- Regularly Assess
- Implement Improvements
- Reward and Recognize
- Celebrate Success
- Measure Value

"Knowledge flows along existing pathways in organizations. If we want to understand how to improve the flow of knowledge, we need to understand those pathways."

~ Larry Prusak, Founder, Institute of Knowledge Management







# Rockwell Collins Contacts

### Mike Gries

Manager, Knowledge & Process Development (Engineering Development Process and Education, Measures, KM, Workplace Coaching)

### Lynda Braksiek

Manager, Knowledge & Critical Skills Management (KM, Change Management, Learning & Development, Workplace Coaching, CoP Lead)

### Melissa Rammelsberg

KM Project Manager (Project Management, Wikis, Change Management, Workplace Coaching, CoP Lead)

### Anne Wiskerchen

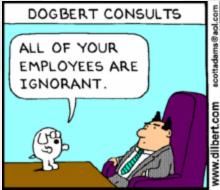
Social Media Communications Specialist (Communications, Portals, Social Media, Workplace Coaching, CoP Lead)







# Epedia Knowledge Base







#### **Current State**

- This collaborative space provides an environment for gaining and contributing knowledge on engineering People, Process, Tools and Technology.
- Best practices, tool policies, lessons learned, governing process and guidelines, FAQs, and tools support model are among the artifacts searchable within Epedia.
- Includes People, Process, Tools and Technology, Forums for Tool Support
- Governed by Epedia Council to set strategic and tactical direction

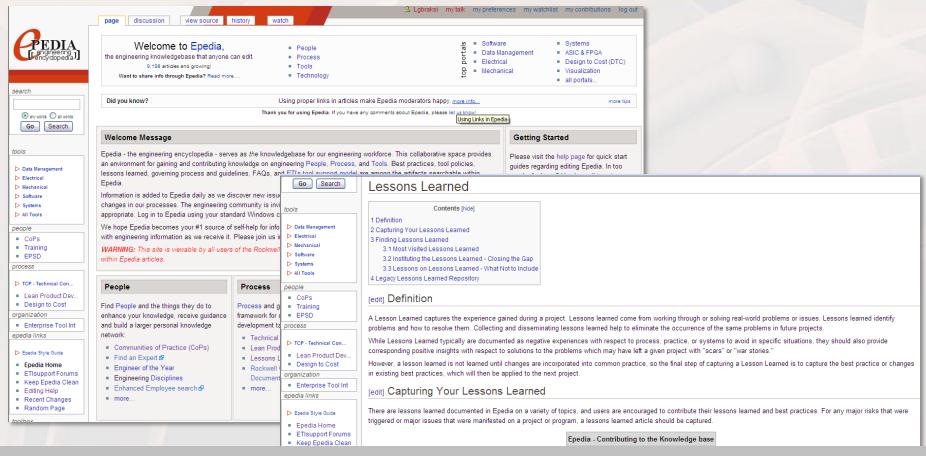
#### **Challenges**

- Growth and Adoption
- Governance Strategy and IT Infrastructure
- Moderator Role

#### **FACTS:**

9,200 Articles and Growing 6,000 Unique Visitors Per Month 20,000 Visits Per Month 1,700,000 Hits Per Month





#### New Employee Feedback – RC India

"Best thing about Rockwell Collins is that most of the information is well documented on sites like Epedia, ETIForum and Sharepoint", she says. She suggests newcomers not to be hesitant and to use all the knowledge and rich experience of people that is readily available.

- Officer Design Newton (642 Net

Critical Design Review (942 views)



# Communities of Practice at RCI

#### Purpose

The intent of CoPs is to link people to people to share knowledge. CoPs are open to employees to network with peers, share best practices, solve problems, and tell "stories" about work experiences. CoP co-leads are typically employees who form a CoP around an area of expertise, have passion for their craft and desire to share what they know and learn.

#### Current State

- 73 Active Communities
- Categories of CoPs:
  - Domain (4), Enterprise Framework (13), Financial (1), Human Resources (3), Project Management (4), Electrical (6), Engineering Infrastructure (8), Mechanical (8), Product Life Cycle (11), Software (6), Systems (10)
- Self-forming, led by practitioners, held over the lunch hour
- Funding for lunch, reward & recognition
- CoP<sup>2</sup> Community for CoP leaders

### Challenges

- Overcoming cultural barriers to sharing information
- Overcoming global challenges Do virtual CoPs work? Do we accommodate all time zones and cultures?
- Value Proposition employees and leaders. Is this time well spent? Is it worth giving up my lunch hour? Is it worth paying for lunches?

Communities of Practice (CoPs) > SYSTEMS ENGINEERING CoPs > Systems Engineering Excellence CoP

Welcome CCANET Vgbraksi \* | 0





#### Current Site

#### Home

#### View All Site Content

#### Documents

- Materials
- Presentations
- INCOSE Newsletters
- CoP Topics and Ideas
- Guidelines for Foreign Nationals
- General CoP info (brochure, etc.)
- Conference Room Info
- CoP Testamonials
- CoP Signs & KM Fair Signs

#### **Pictures**

Pictures

#### Lists

- My To Do List
- Action Items
- Events
- Regional Coordinators
- Regional Coordinator Resources
- Presentation Links (external to TeamSpace)
- CoP Meeting Prep Resources
- Regional Events

#### Discussions

- Questions/tips/tricks
- Systems Engineering: General Forum
- Requirements Analysis Forum
- Architecture & Design Forum
- Integration, Verification, &



#### Announcements

Points of Contact by CCANET\nlholtz

#### Co-Leads

Raymond "Ray" Jorgensen

VPN 295-2615

rwjorgen@rockwellcollins.com

Lisa Schreihart VPN 295-9150

Imschrei@rockwellcollins.com

#### **Boudi El Fouly**

aaelfoul@rockwellcollins.com

#### Presentation Materials

by Jorgensen Raymond W 🥯

Two places to find presentation materials:

- 1) Under Presentations under Documents
- Stored within this TeamSpace
- 2) Under Presentation Links (external to TeamSpace) under Lists Maintained in a separate location outside this TeamSpace

#### OUR MISSION STATEMENT

12/16/2009 10:48 AM

2/16/2010 4:17 PM

8/13/2010 9:53 AM

by Schreihart Lisa M

CoPs provide opportunities to transfer knowledge/skills and share experiences amongst practitioners, both experts and novices. The Systems Engineering Excellence CoP is an informal community to share information regarding systems engineering in general...

#### WE HAVE SYSTEMS ENGINEERING FORUMS!

by Schreihart Lisa M @

Look under Discussions on the left side of this page for a list of new forums for Systems Engineering. Go here to ask questions of the CoP membership and experts within the enterprise on various SE topics. Add your 2 cents to any discussion!

#### Are You Interested in Joining this CoP?

by CCANET\nlholtz

11/2/2009 2:04 PM

6/27/2007 2:52 PM

Links

■!!! TeamRoom for our CoP - Go here for access to past presentations and reference materials

- Ask Al (The Answer Locator)
- Conference Rooms
- CoP Menu Selections
- ETIpedia
- Facility Locator Maps



#### JOIN THIS COP... YOU KNOW YOU WANT TO! \*

To receive invitations and information specific to this CoP, please complete the following steps:

- 1. Click on the 'Add' button.
- 2. Do name search & select the name you wish
- 3. Click on the 'Add' button.

The name you selected will automatically populate into the Lotus Notes group address book assigned to this CoP.

Group: CollinsCoP-SysEngExcellence

Add

Display Names



# RCI Enterprise Search

#### History

- Key Design and Development Cycle Time Reduction initiative in 2006
- Productivity tool and key enabler to knowledge management provided by e-Business and Engineering and Technology

#### Current State

- Key Design and Development Cycle Time Reduction initiative in 2006
- Productivity tool and key enabler to knowledge management provided by e-Business and Engineering and Technology
- One of the most widely used systems at Rockwell Collins with over 17,000 unique users executing an average of 34 queries each

#### Governance and Future State

- Expand Coverage (Metadata, Faceted Search, Fileshares)
- Improve Usefulness and Adoption
- Search Council

### Challenges

- Data content inclusion
- Overcoming cultural barriers
- Making it relevant
- Keeping it simple



# Skills Management

### History

Three runs at Skills Management/Expertise Location Systems.

#### Current State

- Workforce Skills Inventory tool for managing Engineering critical skills
- Skills reviewed with Chief Engineer's Council, manager enters employee skills, updated annually.
- Not accessible by employees
- Workforce Information Network (WIN) Phonebook System
  - Does Not Include Skills Related Information

#### Future State

- Researching solutions that will meet employee and leader needs for managing critical skills and finding experts
- Investigating the impact and value of social media

### Challenges

- Overcoming cultural barriers
- Keeping it simple





Rockwell Collins Online

Building trust every day

Workforce Skills Inventory

Welcome, Igbraksi! (role=WSIENGR)									
SAP Toolkit HOME	Critical Skills Summary	Employees with Specified Skills	Participating Employees	Subordinate Summary	Help Feedback				
Employee Actions	Raymond W Jo	rgensen [00207966]	TSSC: No FN: No	IN: No					
Objects on Loan	Employee Domains								
Shift Change Workforce Skill Inventory	11	Flight Management System - FMS		~					
	Secondary Domain:	Integrated Systems & Applications		~					
Employee Inquiries	Domain.								
Employee Information	Employee Skills								
Personal History	Primary Skills								
Salary History		on the skill set currently used.							
Org Reporting	11 '-	ecialties and tools choices populate	e based on discipline.						
	Discipline:	Systems		~					
<u>Help</u>	Specialty 1:	Requirements Allocation/ Managemen	ıt	<u>~</u>					
FAQ	Specialty 2:	Architectural Development		~					
	Tool/Software 1:	DOORS		~					
	Tool/Software 2:	Select an item		~					
		on the skill set currently used. ecialties and tools choices populate	e based on discipline.						
	Discipline:	Technical Project Manager		~					
	Specialty 1:	Project Execution		~					
	Specialty 2:	Select an item		~					
	Tool/Software 1:	MS Project		~					
	Tool/Software 2:	Select an item		~					
	Submit Changes	Cancel							

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# Question and Answer Session

# Checking questions submitted via chat screen

All lines are muted. Please send your questions via chat to the "Q&A Group". We'll cover them at the end of this session.

We <u>WILL</u> send out slides and a link to the recording of the event in the coming days.

Community of Practice

# Thank You for Attending!

 Feel free to forward questions or recommended topics to

schandler@ame.org

rwebb@apqc.org

