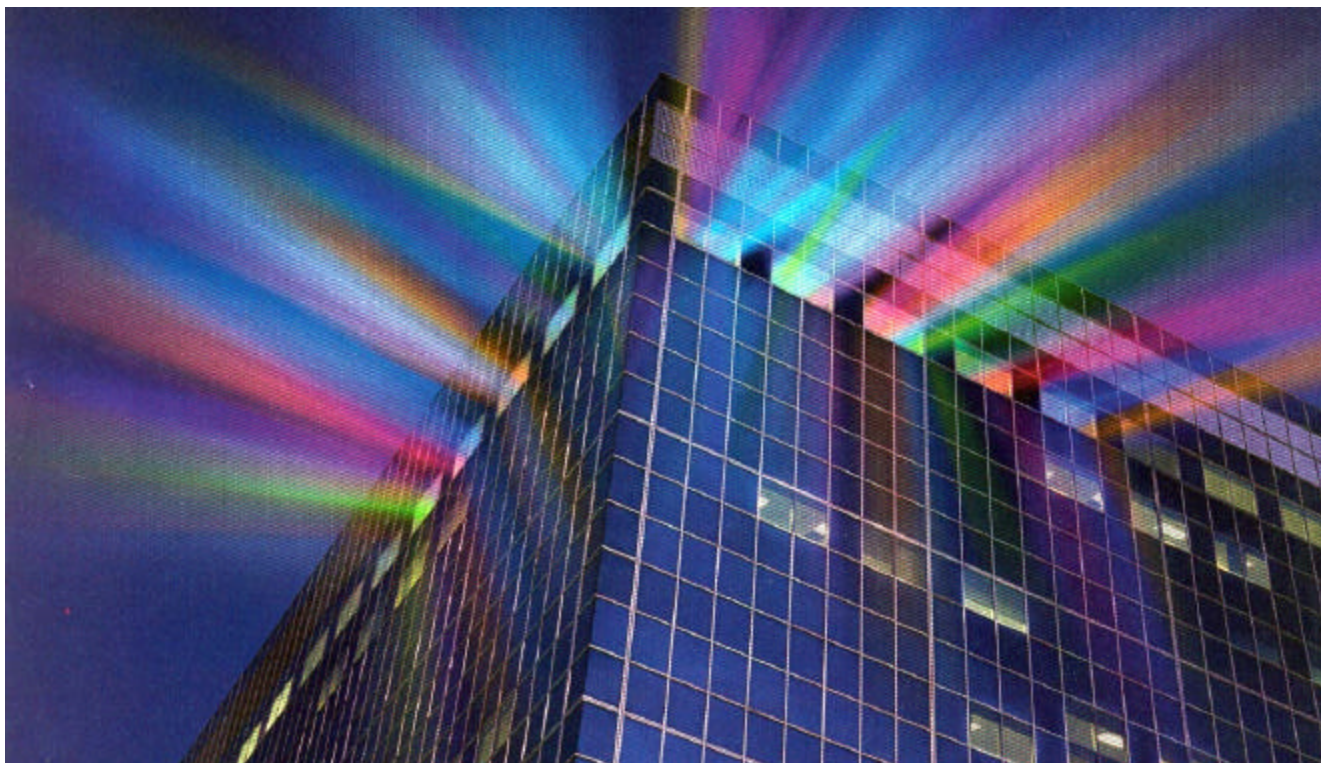


Knowledge Management at Cytec Industries

Building the Library of the Future



David A. Breiner

American Chemical Society Meeting
August 28, 2005

CYTEC

Quote

“Small or large, the mission of the company library is the same: To select, obtain, store, and disseminate pertinent technical information to those who need it, as rapidly and efficiently as possible.”

Harold S. Sharp, Technical Librarian
General Motors, A.C. Spark Plug Division
Industrial Laboratories, November 1959

Libraries have always been essential to
Knowledge Management in R&D.

Outline

- Provide a brief overview of Cytec
- Review our Knowledge Management initiative
- Share our lessons learned
- Share our vision for the future
- Answer your questions

CYTEC

Technology ahead of its time™



Cytec Industries is a specialty chemicals and materials technology company with pro-forma sales in 2004, including the Surface Specialties acquisition, of approximately \$3.0 Billion. Its growth strategies are based on developing technologically advanced customer solutions for global markets, including aerospace, coatings, mining, plastics and water treatment.

Founded in 1993 as a spin-off from American Cyanamid

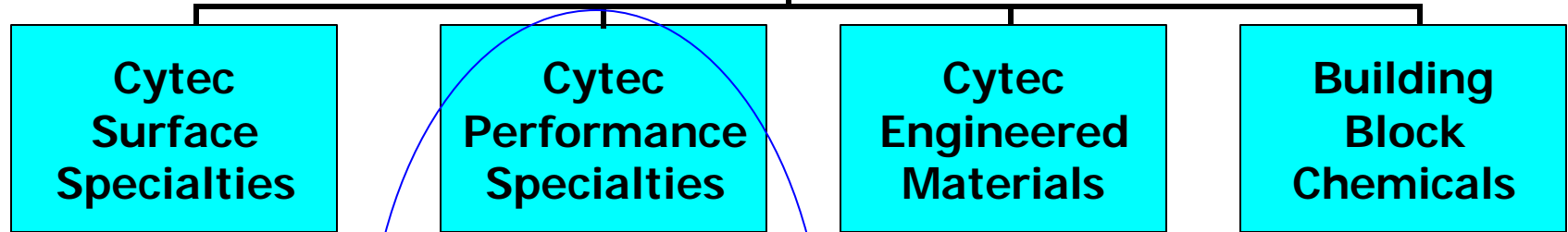
<http://www.cytec.com/>

CYTEC

Cytec Businesses



David Lilley
CEO, Cytec Industries



Ben Van Assche
President, CSS

54%



Shane Fleming
President, CPS

21%



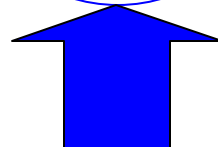
Steve Speak
President, CEM

17%



Jas Gill
President, BBC

8%



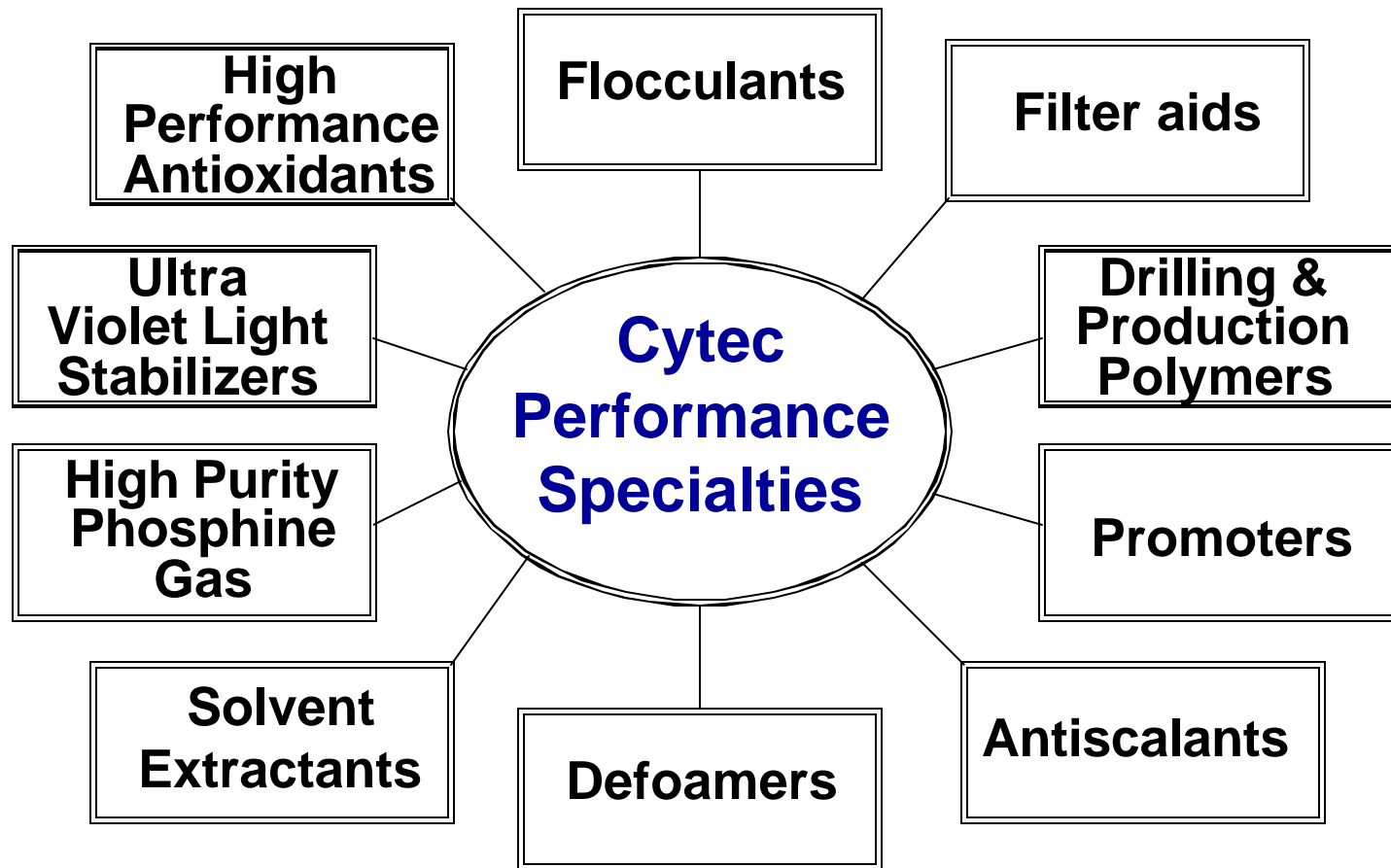
Cytec Performance Specialties (CPS)

- 2004 net sales approximately \$650M / '05P \$733M
- Approximately 1,800 employees
- Business Units include:
 - Mining Chemicals (\$174 M)
 - Phosphines & Phosphorous Specialties (\$41 M)
 - Polymer Additives (\$155 M)
 - Specialty Additives (\$123 M)
 - Water Treatment Chemicals (\$241 M)
- Research sites in Stamford CT, Canada, United Kingdom, Netherlands, and Chile
- Global Application Specialists located remotely

The Commitment of Good People to Technology and Customers

CYTEC

CPS Product Examples



Many existing products and new products in portfolio

Why did we need
Knowledge Management
in CPS R&D?

State of CPS R&D: May 2003

- All Business Units manage their own documents with no standardized processes
- No centralized document repository
- Site-centric focus for information management
- Difficult retrieval of internal information
- Limited external information resources
- Stamford site undergoing \$50M renovation
- Stamford Library has no manager and considered obsolete by scientific community



American Cyanamid Stamford Library 1938

Loss of
in-house
knowledge

Obsolete
Library

Paper, email, &
hard drive
files

**We needed
KM...but how
would we
do it?**

Decreased
productivity

Information
silos

Limited
sharing of
best practices

Knowledge Management Project

Objectives:

- Design and implement processes and supporting systems to effectively document, archive, and retrieve relevant technical information across global Cytec Performance Specialties (CPS) R&D.
- Design the “Library of the Future” to enable our scientific community to acquire the knowledge and information necessary to discover advanced technology.

*Bring the Technical Information Center
into the 21st Century!*

Project Team

- **Sponsor:** Dr. Joseph Kozakiewicz (VP, CPS R&D)
- **Leader:** David Breiner (TIC Manager)
- **Timeline:** July 2003 – December 2005
- **Members:** Jeanne Courter (Coatings), Leonard Davis (PA), Raymond Farinato (WT), Steve Greenhouse (Analytical), Nimal Jayasuriya (SA), James Jubinsky (Patent), John Hillhouse (Phosphines), Dana Moore (TIC), Wilfred Perez (Mining), Gary Walters (IT)

People lead...Processes guide...Tools enable

Mission

Be a premier **Technical Information Center**, enabling Cytec Performance Specialties (CPS) to achieve 25% sales of new products by:

- (1) Partnering with CPS R&D and other key customers
- (2) Leveraging appropriate technology to search, archive, and disseminate internal data and documents and external published information in a cost-effective, user-friendly manner
- (3) Providing a center for learning, idea exchange, and innovation



Our Logo

Technical Information Center

Knowledge for technology ahead of its time

CYTEC

Design Requirements

- **Single portal** for internal and external information
- Utilize **existing tools** and **infrastructure** available within Corporate IT
- **Globally accessible** and **secure**
- Leverage **electronic** capabilities (“virtual”)
- **User friendly** with minimal training
- Use “**As Is**” processes if possible
- **Standardize** systems, processes, and tools
- **Minimize** administration
- Aligned with Corporate **Record Retention** policy

*Get the **Right Information** to the
Right People at the **Right Time!***

Scope: Internal Information

- Analytical Work (LIMS)
- Filed Patent Applications
- Laboratory Notebooks
- Monthly Reports
- New Product Development
- Non-Disclosure Agreements
- Research Reports
- Technical Service Reports
- Technical Presentations
- Trip Reports

Scope: External Information

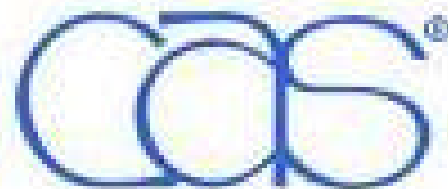
- Cytec Published Patents
- Cytec Published Journal Articles
- Prior Art / Literature Searches
- Competitor Patents
- Journals
- Books
- Technical Standards
- Market Research
- Websites

Implementation: Internal Information

CPS R&D Technical Archive:

- Policies and Procedures designed and implemented by Knowledge Management Team
- DocuShare (Xerox) utilized as central repository
- Folder hierarchy designed and owned by TIC
- Permissions administered and owned by TIC
- Business Unit documents (Monthly Reports, Technical Presentations, Project Documents, Trip Reports, Technical Service Reports) archived by designated content managers
- Centralized documents (Research Reports, Cytec Publications/Patents, Notebooks) archived by TIC

Implementation: External Information



CYTEC

KM in CPS R&D: August 2005

- Standardized documenting and archiving processes implemented across all Business Units
- Centralized repository for technical documents
- Global, user-friendly retrieval of internal and external information
- TIC provides external information to Engineered Materials and Building Blocks divisions
- TIC collaborating with Surface Specialties CITM for External Information resources
- TIC is a hub for cross-functional R&D activity in Stamford (poster sessions and seminars)

CPS Scientific Community



TIC Poster Sessions and Seminars



Technical Information Center

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Testimonials

- *...a simple user-friendly resource for easy and convenient access to a variety of useful information.* - Phosphines
- *...has effectively increased the quantity and quality of my ideas.* - Water Treatment Chemicals
- *...has changed what was once an information hunt to a knowledge flow. Great job!* - Mining Chemicals
- *...a well organized, excellent tool.* – Polymer Additives
- *...has moved the library to the screen of our desktop PCs. Not only is there much more information available electronically than in the past, but it's all in one place.*
– Analytical

Lessons Learned

- Link KM directly to your business model
- Focus on people and processes, not tools
- Cultural change takes time and energy
- Start small, then expand your reach
- Make your website valuable, but keep it simple
- Select appropriate external resources
- Continuously monitor, evaluate, and improve
- Be fully supported by senior management
- If you feed them, they will come
- Have a compelling mission and a clear vision

Our Vision

To provide state-of-the-art, value-added technical information services that will enable Cytec to discover, develop, and market new products and technologies in order to sustain competitive advantage across all of its businesses.

*Get the **Right Information** to the **Right People** at the **Right Time!***

Technical Information Center

Knowledge for technology ahead of its time

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Acknowledgements

- **Dr. Joseph Kozakiewicz, VP CPS R&D**

- **Knowledge Management Project Team**

Jeanne Courter (Coatings), Leonard Davis (Polymer Additives), Raymond Farinato (Water Treating), Steven Greenhouse (Analytical), Nimal Jayasuriya (Specialty Additives), James Jubinsky (Patent), John Hillhouse (Phosphines), Dana Moore (TIC), Wilfred Perez (Mining), Gary Walters (IT)

- **CPS Technology Leadership Team**

Russell Cappadona (Polymer Additives), Amy Essensfeld (Coatings), Eduardo Kamenetzky (Analytical), David Ley (Polymer Additives / Specialty Additives), Donato Nucciarone (Phosphines), Lou Rosati (Water Treating), Alan Rothenberg (Mining), Claire Schultz (Patent)

- **Administrative Assistants**

Erika Edwards (Patent), Janice Graham (Phosphines), Ann Kopp (Coatings), Lucille Lester (Polymer Additives / Specialty Additives), Valerie McNeil (Analytical / Mining), Mary Miller (Patent), Inez Minor (Water Treating), Cheryle Telesco (Patent)

- **Information Technology**

Rich Hagan (Stamford), Peter Kefali (DocuShare), Tariq Rahman (Internet)

Answer Your Questions



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Cytec Industries

Technical Information Center

Stamford, CT

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