

# Collaborative Strategies

Collaborative Technology Analysts and Consultants since 1990

## The Future of Collaboration

David Coleman

CTS 2004 Keynote





# Presentation Overview

- ❑ Background: definitions, where are we today and how did we get here!
- ❑ Evolution: The evolution of Asynchronous and Real-time collaboration
- ❑ Best Practices: How Well Do You Collaborate Today? (Exercise)
- ❑ Current State: Where are we today?
- ❑ Future Imperfect: Trends and directions for a collaborative future



# Section 1: Background

Definitions; where are we today and  
how did we get here?



# Definitions of Electronic Collaboration

- ❑ Intentional group processes plus software to support them. ***Peter & Trudy Johnson-Lenz, 1978***
- ❑ A co-evolving human tool system. ***Doug Engelbart, 1988***
- ❑ Computer-mediated interactions that increase the productivity or functionality of person-to-person processes. ***David Coleman, 1992***
- ❑ ***"E-Collaboration occurs anytime you have 2 or more people sharing complex information via the computer on an ongoing basis for a specific purpose or goal."***



# Critical Definitions

- ❑ **Communication:** a message is sent from person A to person B, and receipt is acknowledged by person B
- ❑ **Interaction:** a message is sent from person A to person B, and receipt is acknowledged by person B, and person B sends a message back to person A in reply.
- ❑ **Collaboration-** multiple interactions between two or more people for some common goal



# Audience Question 1

- In meetings (in person or remote) that you facilitate or participate in, what % of the time are people:
  - Communicating (0 = 0%, 5 = 50%, 10 = 100%)



# Audience Question 2

- In meetings (in person or remote) that you facilitate or participate in, what % of the time are people:
  - Interacting (0 = 0%, 5 = 50%, 10 = 100%)



# Audience Question 3

- In meetings (in person or remote) that you facilitate or participate in, what % of the time are people:
  - Collaborating (0 = 0%, 5 = 50%, and 10 = 100%)





# Critical Definitions -2

- ❑ **Synchronous Collaboration**- the interaction occurs via computer within 5 seconds (ex: IM/chat)
- ❑ **Asynchronous Collaboration**- no time limit on the computer-mediated interaction (ex: BBS, threaded discussions, e-mail)



# Audience Question – 4

- What % of the time do you collaborate asynchronously?
- Note: the two % must add up to 100%



# Audience Question 5

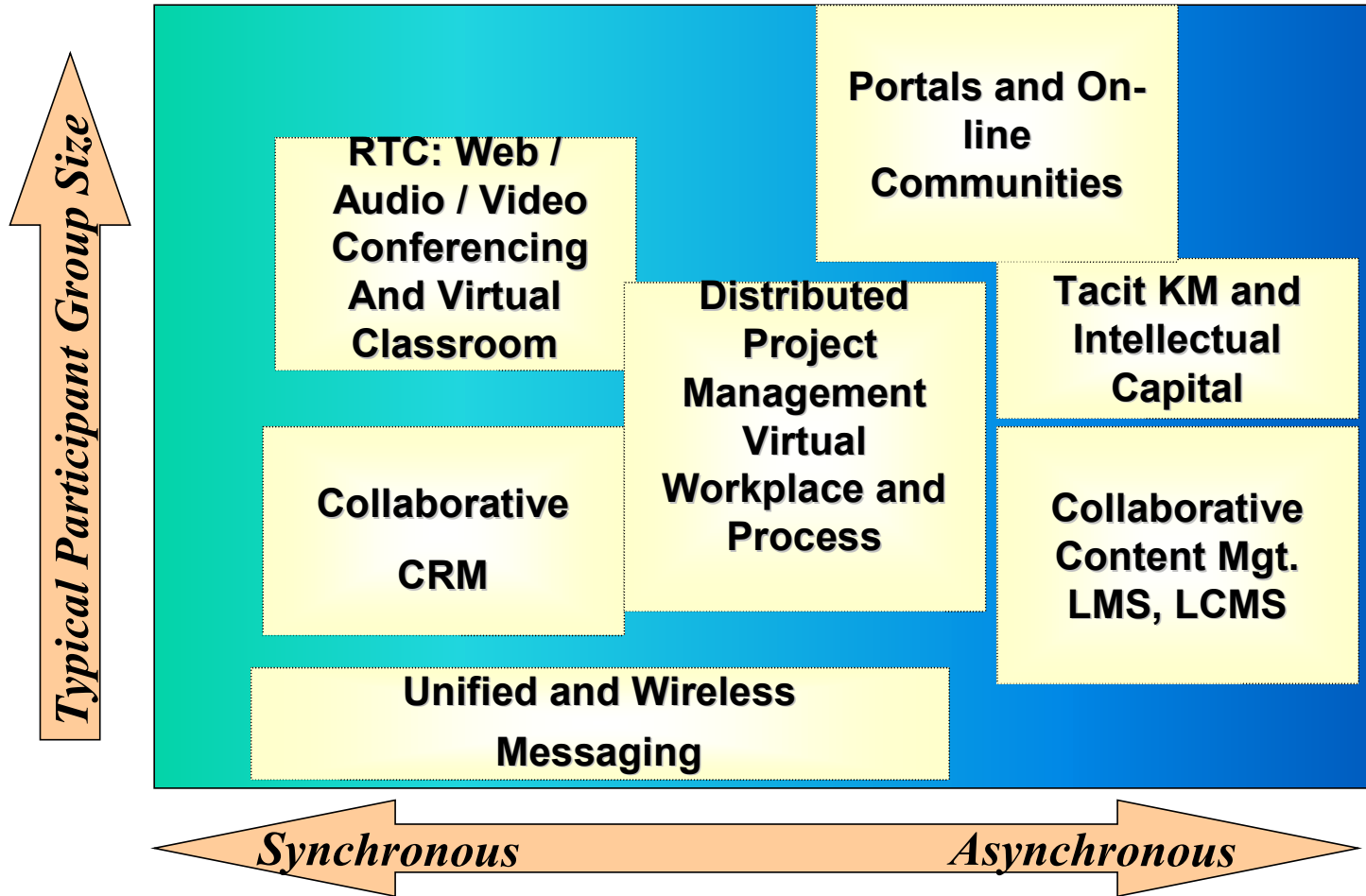
- What % of the time do you collaborate synchronously (in real-time)
- Note: the two % must add up to 100%



# Collaborative Data Model

- ❑ All collaborative interactions have to incorporate one or more of these four data types:
  - Structured Data (database)
  - Unstructured Data (e-mail, documents, etc.)
  - Conversations (IM, threaded discussions, etc.)
  - Tasks

## Collaborative Strategies Functional Taxonomy 2003



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# Audience Question -6

- ❑ Which area of the collaborative taxonomy do you use the most?
  1. RTC and Virtual Classroom
  2. Virtual team tools (DPM)
  3. Collaborative CRM
  4. Knowledge Management
  5. Collaborative content/document creation/mgt.
  6. Portals and On-line communities
  7. Unified Messaging and collaborative infrastructure

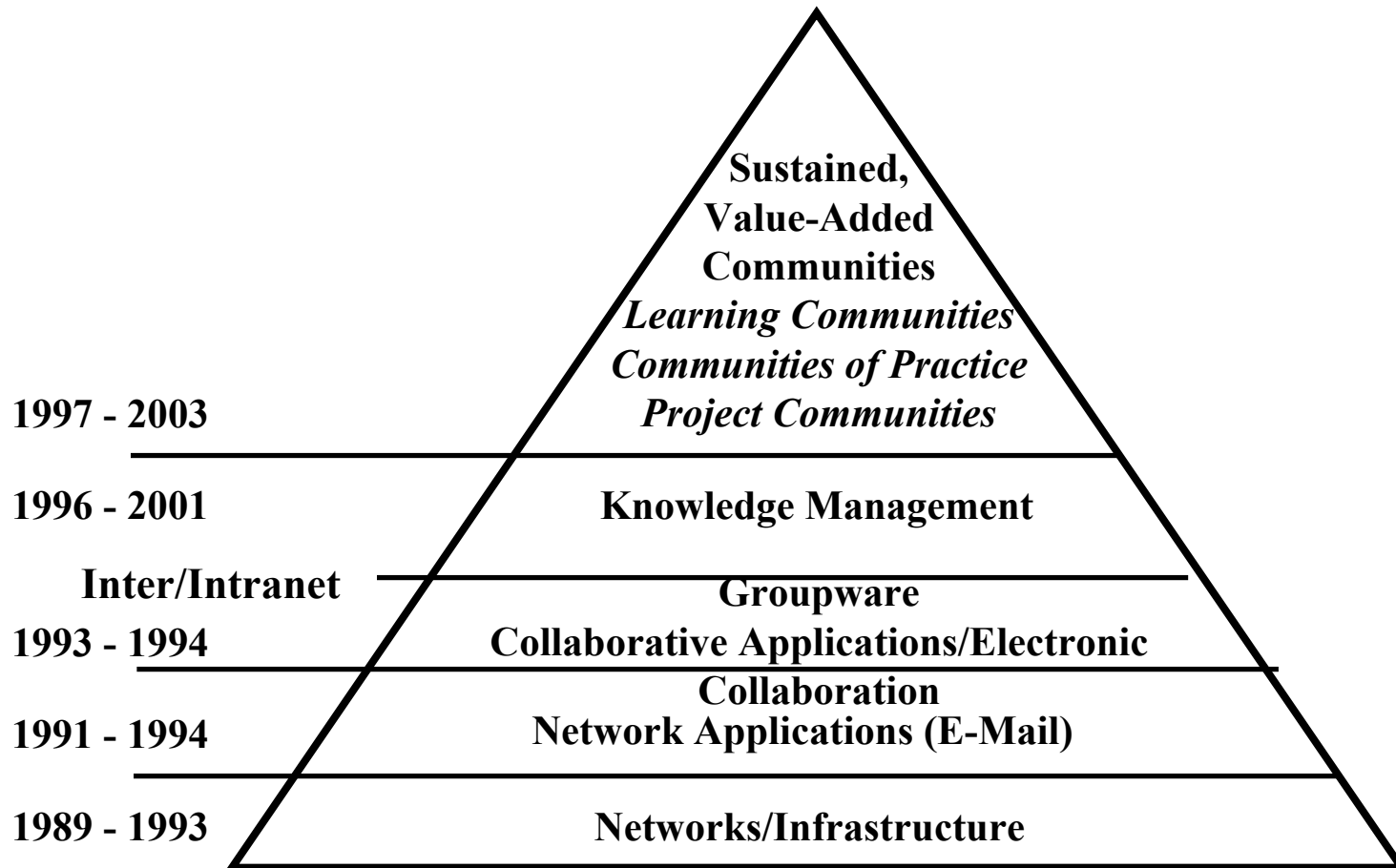


# Section 2: Evolution

## The Evolution of Asynchronous and Real-Time Collaboration



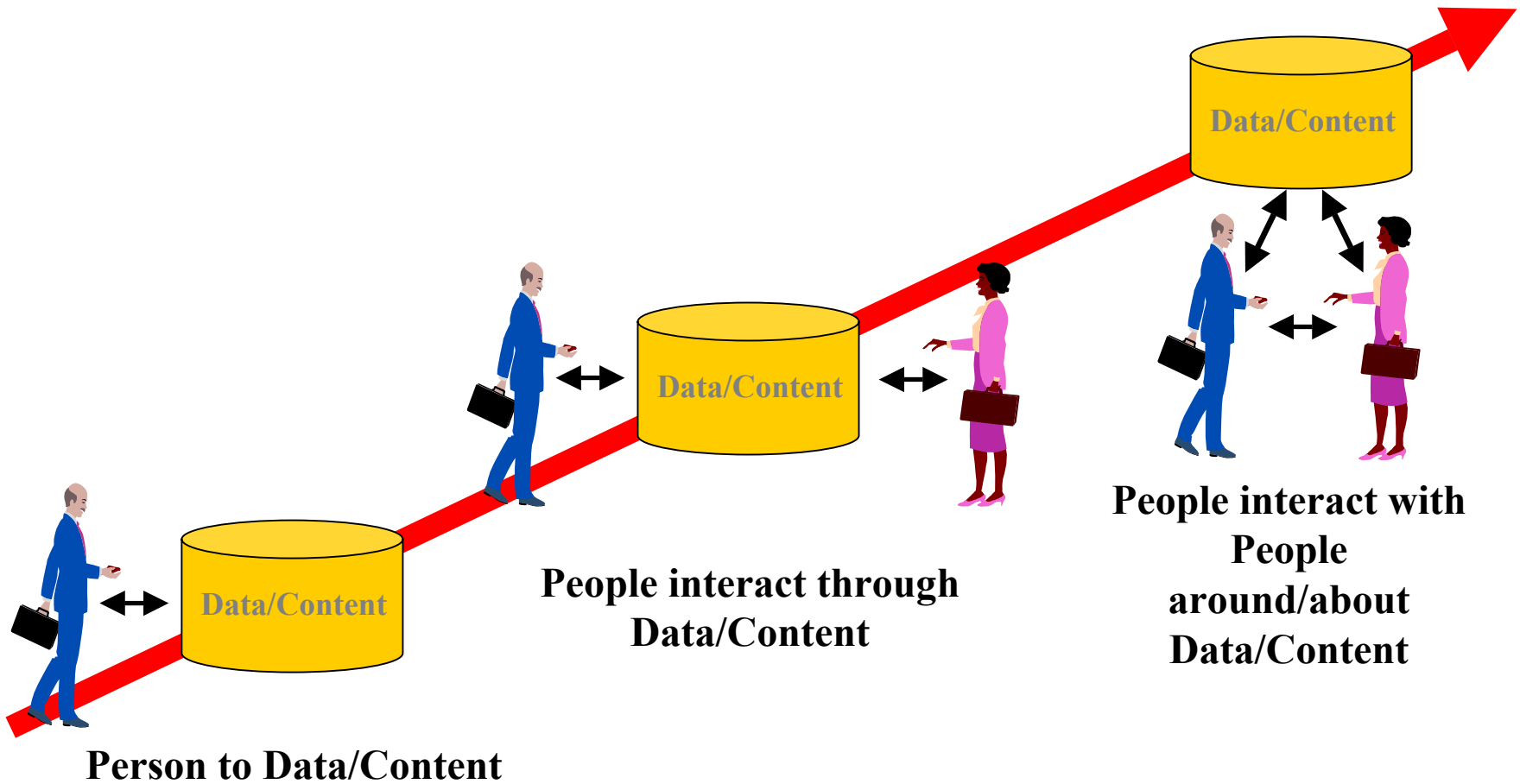
# The Evolution of Asynchronous Collaboration







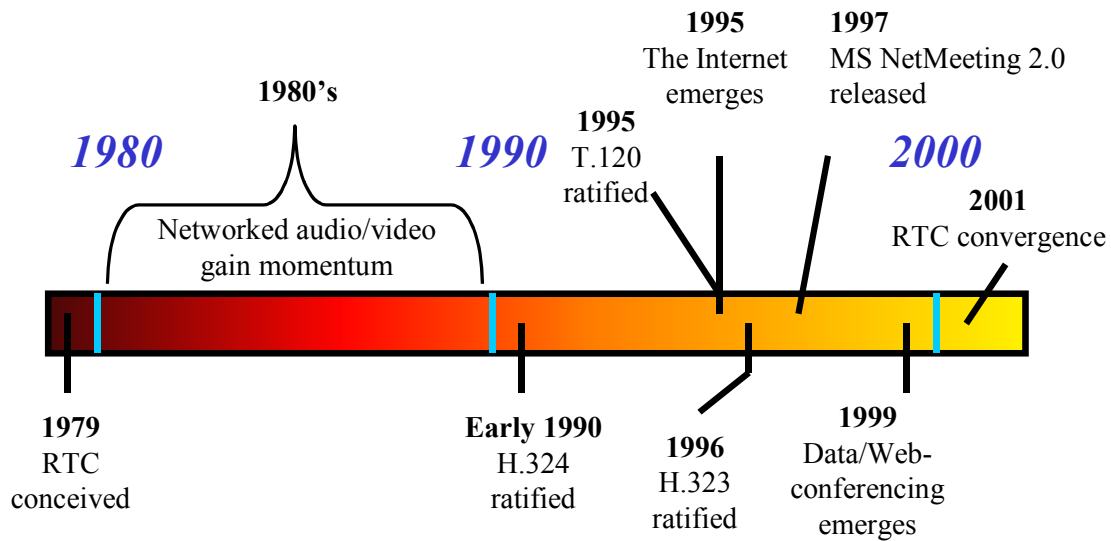
# The Evolution of Interaction





# The Evolution of RTC

## RTC Time Line

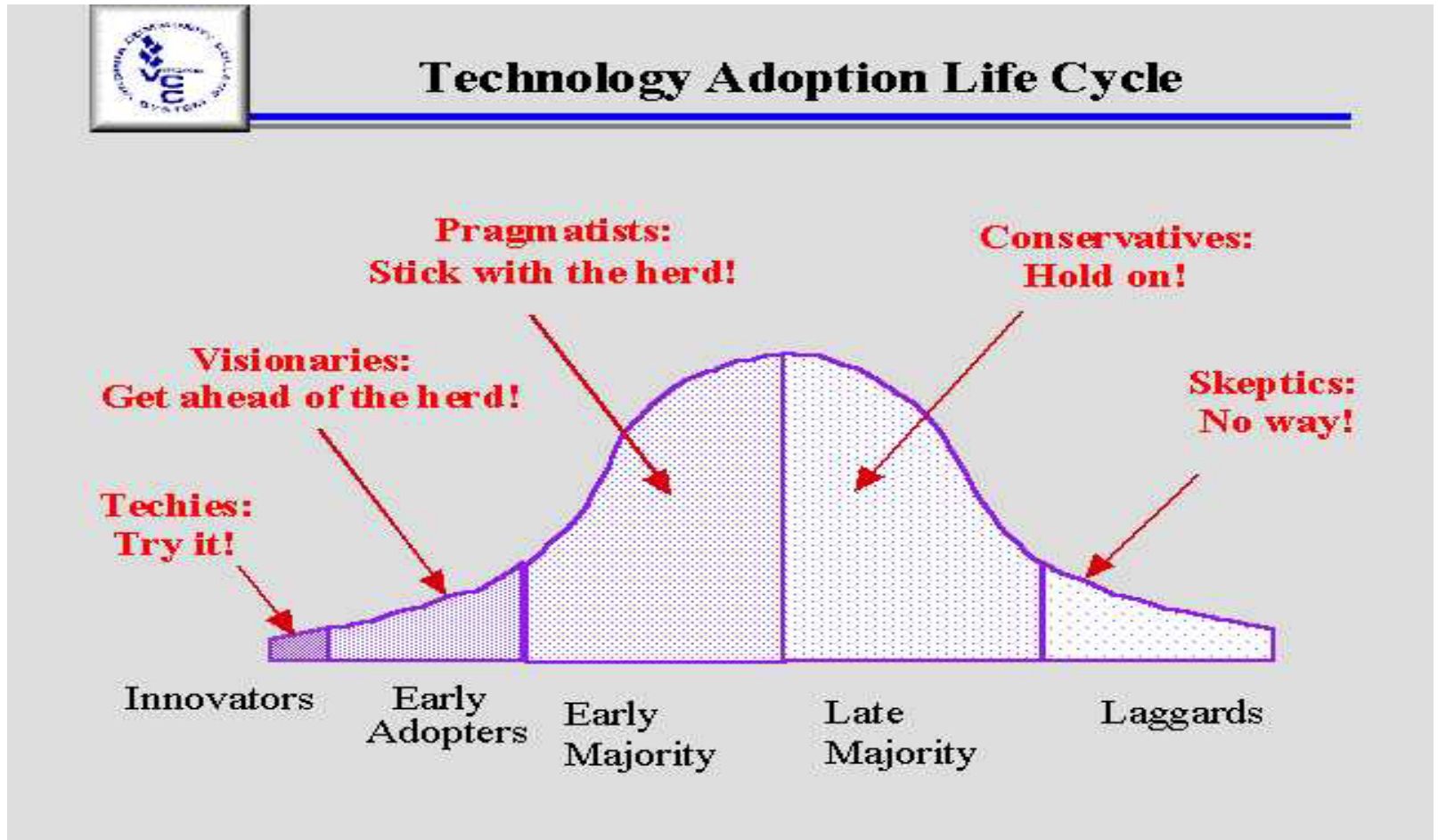


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# Collaborative Market Evolution

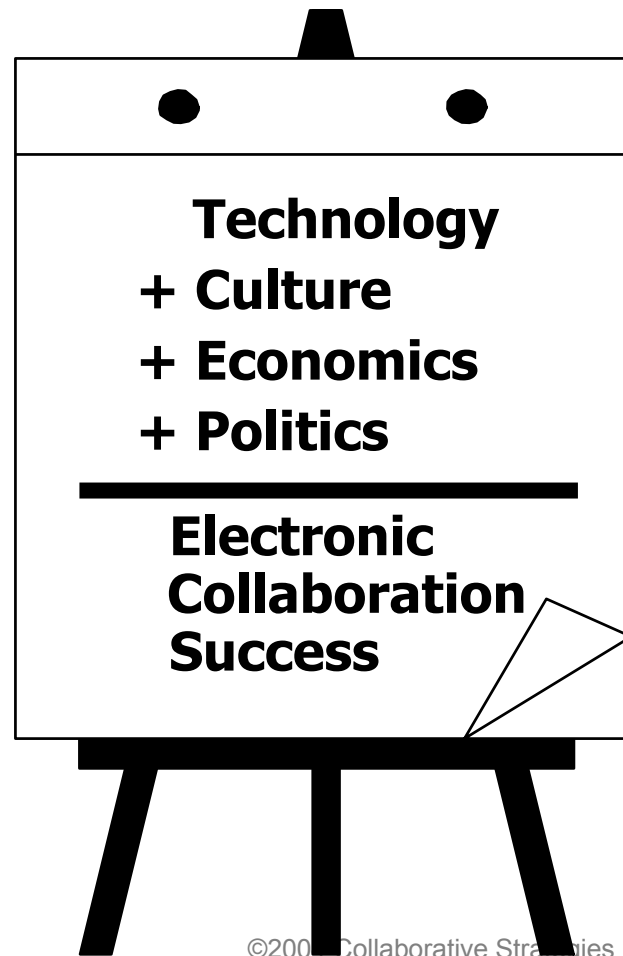




# Section 3: Best Practices

How Ready Are You (or your client's)  
To Collaborate?

# Formula for Electronic Collaboration Success





# Assessing Your Organization's Collaborative Potential (handout)

Technology	Culture	Economics	Politics	
Score =	Score =	Score =	Score =	
Weight = 1	Weight = 2	Weight = 3	Weight = 4	
<b>Subtotal = Score X Weight</b>	<b>Subtotal = Score X Weight</b>	<b>Subtotal = Score X Weight</b>	<b>Subtotal = Score X Weight</b>	<b>Total</b>
+	+	+	=	



# Audience Feedback to Exercise

Your total weighted score was?

< 20

21-30

31-40

41-50

51-60

61-70

71-80

81 +



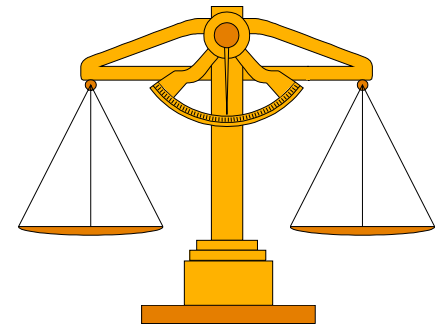
# Rating Your Organization

- ❑ The highest score you can get is 100.
- ❑ Most U.S. companies score between 45-55.
- ❑ Here is the scale for success:

1-60 poor

61-80 good

81-100 excellent







# Section 4: Current Use

Who is using what and how?



# From a Recent ISDW Study

1. 50% time working alone and 50% interacting with others (customers, suppliers, fellow employees, etc.).
2. The two most common communication/collaboration tools are, telephone and e-mail. 35% get more than eight phone calls per day, while 93% get at least 20 e-mails in an average day (35% reported receiving more than 50 e-mails a day).
3. IM not pervasive. 60% reported no use at all of IM.
4. 43% had minimal experience with "Web broadcasts" (i.e., tools like WebEx and PlaceWare).
5. 57% have 1-5 direct contacts with others in a typical work day, while 21% have between 8-10 "F2Fs" a day.



# Data From Pre-Conference Survey

- ❑ What Tools Do You Use Today to Collaborate?
  1. e-Mail
  2. Audio conferencing
  3. Fax
  4. Cellular devices/phones
  5. Online calendar
  6. Paging
  7. Web conferencing
  8. Video conferencing



# Tools People Use for Virtual Work

- ❑ Compare these results with audience results
- ❑ From a 2002 PlaceWare (now Microsoft) Survey
  - E-Mail = 95%
  - Audio conferencing = 70%
  - Fax = 55%
  - Cellular devices/phones = 50%
  - Online calendar = 35%
  - Paging = 25%
  - Web conferencing = 18%
  - Video conferencing = 15%



# My Organization Regularly Collaborates with...

56% - Customers

54% - Business partners

54% - Regulatory authorities

52% - Suppliers

*From InformationWeek Daily, July 31, 2002. Note that multiple responses were allowed in the survey results*



# Which Verticals are adopting RTC Technologies Today

High Tech

Financial Services

Telecommunications

Pharmaceutical/Health Care

Academic Institutions

Government

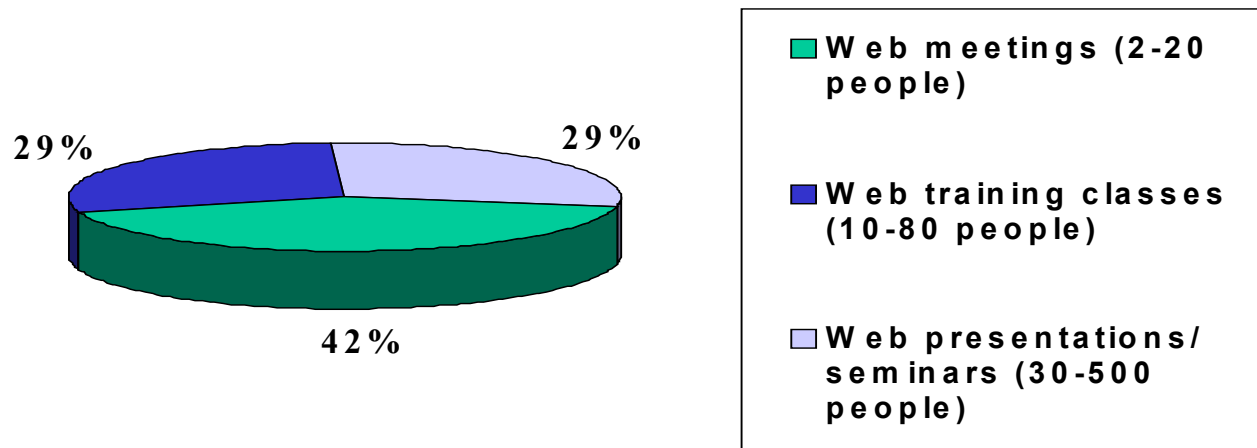
(some) Manufacturing



# Web Conferencing Usage

## WC Tool Usage by Function

*How Companies Use WC Tools*



*Note: Includes both internal and external collaboration.*



# Critical Processes & Collaboration

- ❑ What critical processes do people use collaboration technologies in today?
- ❑ Answers from the survey that Faciliatate.com partnered with Collaborative Strategies.
  - Sales and marketing (joint proposal development)
  - Customer service/support (exception handling)
  - R&D (NPD – new product/service development)
  - Value Network Management





# Section 4: The Future

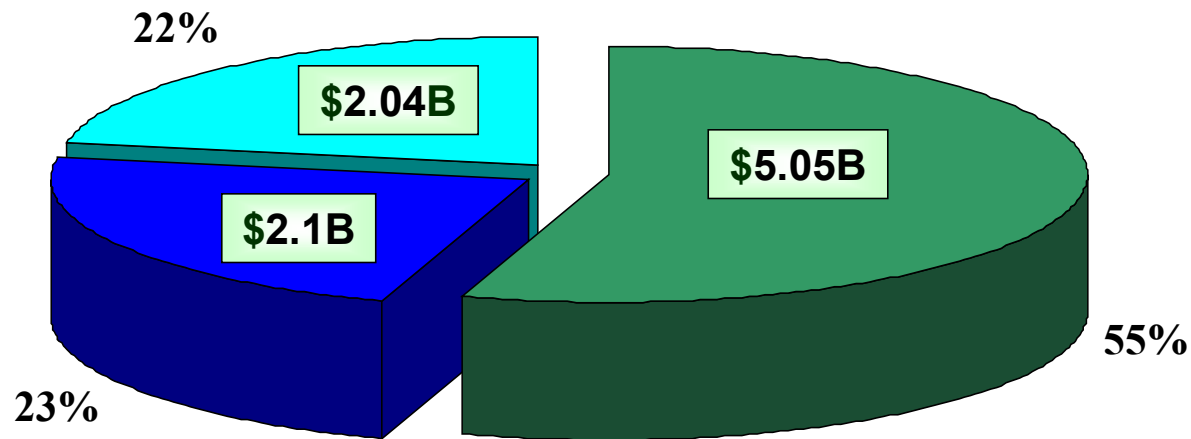
Near (5 years)  
Far (10 years +)



# Overall Market for Collaboration

- ❑ CS estimate of \$20 billion by 2006 (synchronous and asynchronous)
- ❑ Big increase in mobile collaboration as the infrastructure matures (streaming video now on cell phones) – video conferencing soon.
- ❑ Collaboration functions will more and more move into infrastructure, or specific processes so will be harder to track

Total 2006 RTC Market Value: \$9.19B



- Audio (service revenues & bridges)
- Video (endpoints, software & services)
- Data/Web (direct vendor revenues)



# The Future of VoIP

- VoIP traffic will rise to 500 billion minutes by 2005 (Gartner Group)
- VoIP will account for approximately 75% of world voice services by 2007.
- 90% of enterprises with multiple locations will start switching to IP systems for voice over next five years.
- More than one half of large enterprise organizations have deployed or will deploy VoIP in the next 12 months, and nearly half of small and medium organizations will do the same.



# The Future of IM

- ❑ SIP is based on TCP/IP and is in large part likely to supercede H.323 and T.120. Additionally, SIP can support many different types of devices, which T.120 and H.323 can't do very well today.
- ❑ Vendor interoperability: one tool can support all consumer IM products (AIM, ICQ, MSN, Yahoo, etc.)
- ❑ The rise of EIM (enterprise IM)



# Dick Tracy Eat Your Heart Out!





# RTC Trends 2003-2004

- ❑ Trend 1: Convergence:
  - Integration of A/V/D conferencing
  - Integration of Synchronous and Asynchronous collaboration technologies
  - Convergence of Content and Collaboration Systems
  
- ❑ The rise of the e-meeting Market
  - Intense interactions within a small group (2-12)
  - Using all media types – Audio/Video/Data
  - Differs from web conferencing
  - From presentation to collaboration



# E-Meetings: Technology Evolution

## ❑ Web Conferencing (**Real Time - Voice, Video and Data**)

- Reduce Communications Costs
- Improve Communications

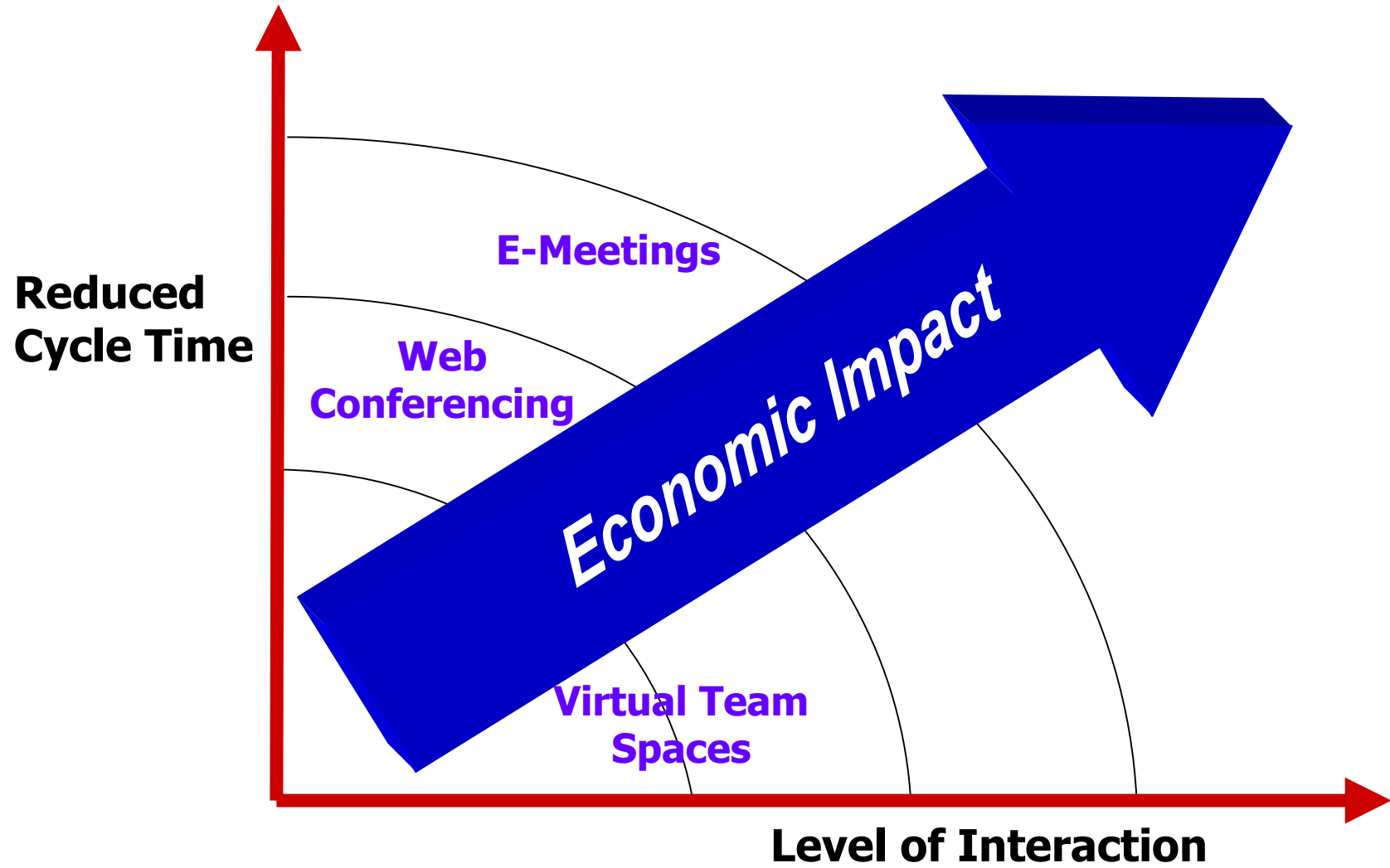
## ❑ Virtual Team Space (**Asynchronous**)

- Shared Work Environments
- Shared Documents

## ❑ E-Meetings (**Convergence of Real Time and Asynchronous**)

- On-demand Work Environments







# E-Meetings

## □ Characteristics

- Complex Interactions
- Ad-hoc Interactions
- Improved Meeting

## □ Features

- Integrated Voice, Video and Data
- Persistence of data
- Presence Detection
- End-to-end security



# Benefits of e-Meetings

## □ E-Meetings support:

- Making timely decisions.
- Conducting status or regular “Calls ”.
- Facilitate crisis communications.
- Create, edit and review documents as a team.
- Make presentations and share information.
- Coordinated work and joint access to information.
- Access to expertise and hard-to-find content.
- Support distance negotiations.
- Secure Tech-Savvy Clients.



# Convergence – Asynchronous Market

- ❑ Team Site - asynchronous collaboration vendors are adding synchronous functionality like application sharing and IM
- ❑ Convergence of Virtual Team Space Technologies and DPM Tools (content tools, project tools)
- ❑ More and more these functions will be accessed through other common applications or interfaces (Outlook PeopleSoft, Oracle, etc.)
- ❑ Microsoft Office System (includes SharePoint and Live Meeting) will get more collaborative market share
- ❑ Full support for the collaborative data model by a variety of end points.



# More Trends

- ❑ Moving from presentation to collaboration
- ❑ Moving from horizontal to vertical market
- ❑ For example: moving from horizontal to process-based collaboration (collaboration in new drug discovery process, M&A transactions, Development of an RFP by sales
- ❑ Moving from product features to marketing and sales... selling solutions!



# More Trends

- Collaborative services will evolve from installation, training, support, customization and application development to strategic services:
  - Where to focus the technology in the enterprise?
  - Dealing with resistance to collaboration in organization
  - How to measure value on an on-going basis?
  - How can I support the client/customer?
  - How can I make sure I add value?



# E-Workplace of Tomorrow

## □ What will change?

- Technology
- Physical work place
- Society
- Behavior
- Organization
- Balancing work and life



# eWorkPlace of Tomorrow

## □ Changes in Technology

- GDSS tools in call centers and blue-collar production work
- Advances in personal identity and security systems
- Group Intelligence Systems
- Technologies that “fail” gracefully
- Greater access to greater bandwidth at lower cost
- Today’s online multi-player gaming technology will be tomorrow’s leading edge business technology





# eWorkPlace of Tomorrow

## ❑ Changes in Place

- Work was your office
- Today work is your desk
- Tomorrow work is *YOU*
- Past- place as perk (corner office)
- Future- Place as work enabler (where you want to work instead of have to work)
- Sometimes virtual is preferential to physical (SARS)
- Moving from working with “things” to ideas, content and data



# eWorkPlace of Tomorrow

## □ Societal Changes

- Fully distributed educational infrastructure: education comes to the student
- Education to support the skills for development and maintenance of physical and e-communities
- The rise of guilds (could be online communities)
- Online voting (no hanging chads!) – current CA problem!
- The rise of the virtual committee! Oh My!
- Defined by your communities (ex: gangs, colors, behaviors)
- Evolving social structures, not bounded by geography but rather by interest and connectedness (ex: AARP-net)



# eWorkPlace of Tomorrow

## □ Behavioral Changes

- Fewer laws, rules of engagement defined by the community (physical or virtual)
- More Project oriented work (see Tom Peters)
- Better feedback systems for greater self-consciousness (videoconferencing)
- Stop separating experts from lay people
- Change in attitude: increase our initial respect for each other
- Ethnographic analysis of work is common



# eWorkPlace of Tomorrow

## □ Organizational Changes

- Flexible workforce, project work, contractors for hire, low-friction talent marketplace
- CEO takes responsibility for organization's intellectual capital, and it is accounted for on the balance sheet
- Change recognition and reward structures as well as compensation packages to support new ways of working
- Less hierarchy, more trust enabled by better security ("good fences make good neighbors")



# eWorkPlace of Tomorrow

## □ Balancing Work and Life

- Can't distinguish your work from your life (job title is your identity)
- Is your job a role? When are you out of it? Forced disconnectedness
- Multi-taskers vs. mono-focus ( different cognitive styles) or divergent and non-linear thinkers vs. linear thinkers



# Future: Long Term

- Ubiquitous Collaboration: what's needed?
  - Security – biometric security
  - Quality of Service (QoS) – gigabit bandwidth
  - Access – interfaces everywhere
- The ability to generate trust
  - Reputation engines in community
  - Community vs. Network
  - Physical and virtual needed



# Back to the Future (of Collaboration)

## □ Ubiquitous Scenario

- Every electronic device is Internet capable/smart
- Inanimate objects are smart (nano and molecular computing... smart roads, smart cups, smarty pants!)
- People and devices are all clamoring for attention
- You can collaborate with anyone, anywhere at anytime and at almost any level of interaction
- When is it time not to collaborate? The sound of one toilet flushing!



# For More Information

- ❑ On 15 criteria for e-meetings see:
- ❑ <http://www.collaborate.com/publication/newsletter/nl0903.html#guru>
- ❑ For Keynote slides see:  
<http://www.collaborate.com/workshops/wks2.html>
- ❑ User name = workshop\_2, Password = cricket
  
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