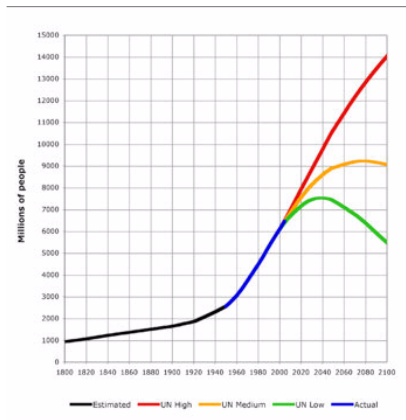
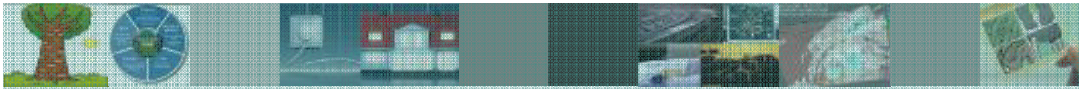


Nuove figure professionali peril Business Analytics: lavorare con le Università percostruire uno Smarter Planet



Carla Milani
IBM University Relations





In quali settori si trova lavoro...

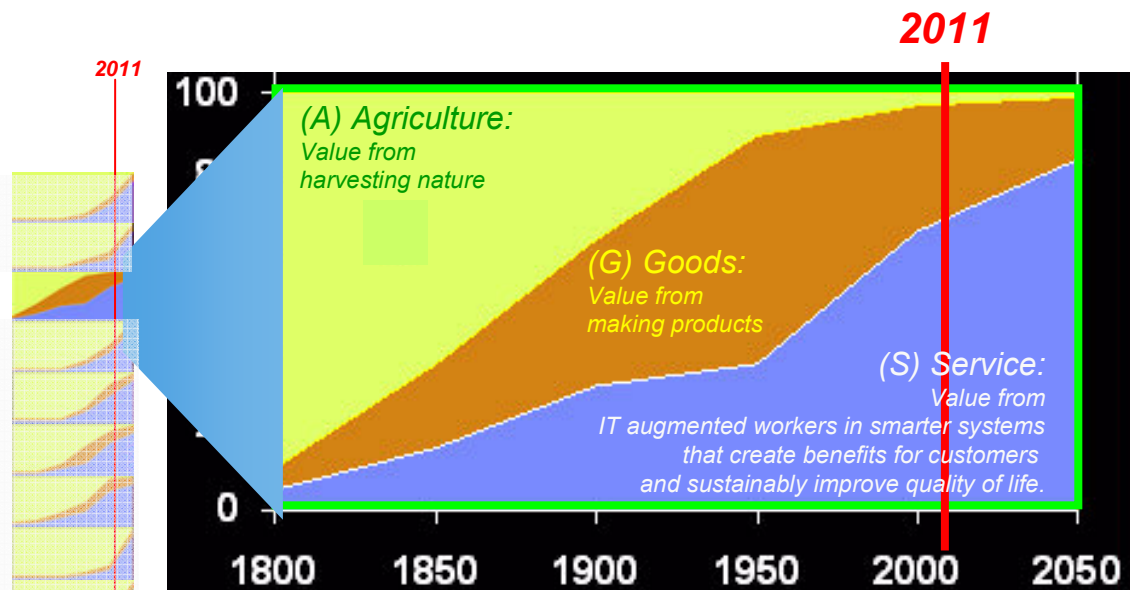
La forza lavoro al mondo

A = Agriculture, G = Goods, S = Service

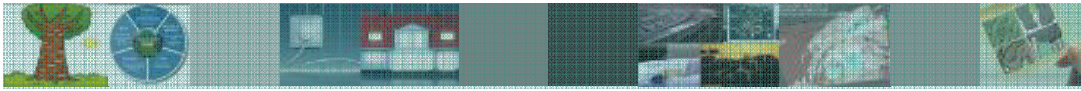
Nation	Labor % WW	A %	G %	S %	40yr Service Growth
China	25.7	49	22	29	142%
India	14.4	60	17	23	35%
U.S.	5.1	1	23	76	23%
Indonesia	3.5	45	16	39	34%
Brazil	3.0	20	14	66	61%
Russia	2.4	10	21	69	64%
Japan	2.2	5	28	67	45%
Nigeria	1.6	70	10	20	19%
Bangladesh	2.1	63	11	26	37%
Germany	1.4	3	33	64	42%

CIA Handbook, International Labor Organization
Note: Pakistan, Vietnam, and Mexico now larger LF than Germany

US:evoluzione verso i servizi

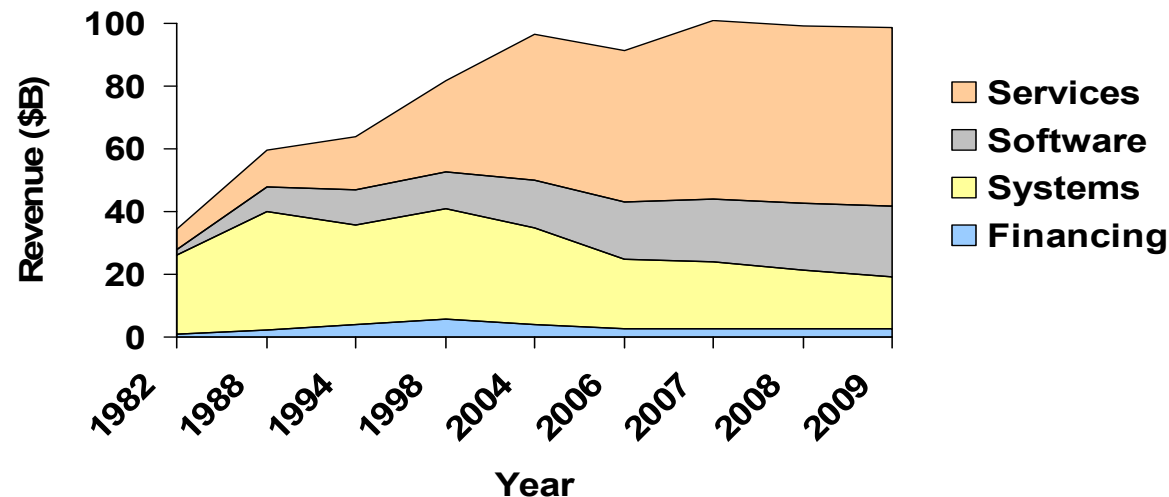


$Services_{OLD} = \text{Not Products (Negative)}$
 $Service_{NEW} = \text{Value-Cocreation (Positive)}$

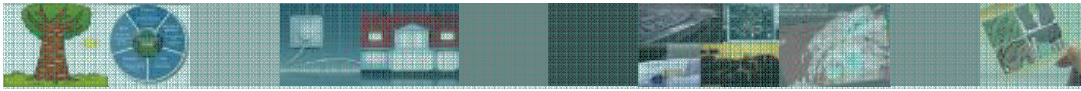


La crescita nei servizi: IBM

Crescita del fatturato nei vari settori

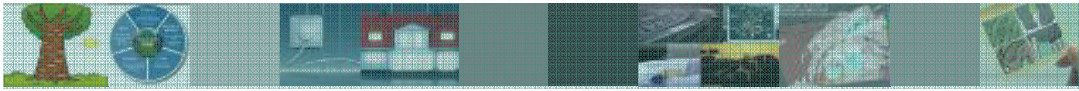


What do IBM Service Professionals Do? **Run** things on behalf of customers, help **Transform** customers to adopt best practices, and **Innovate** with customers.

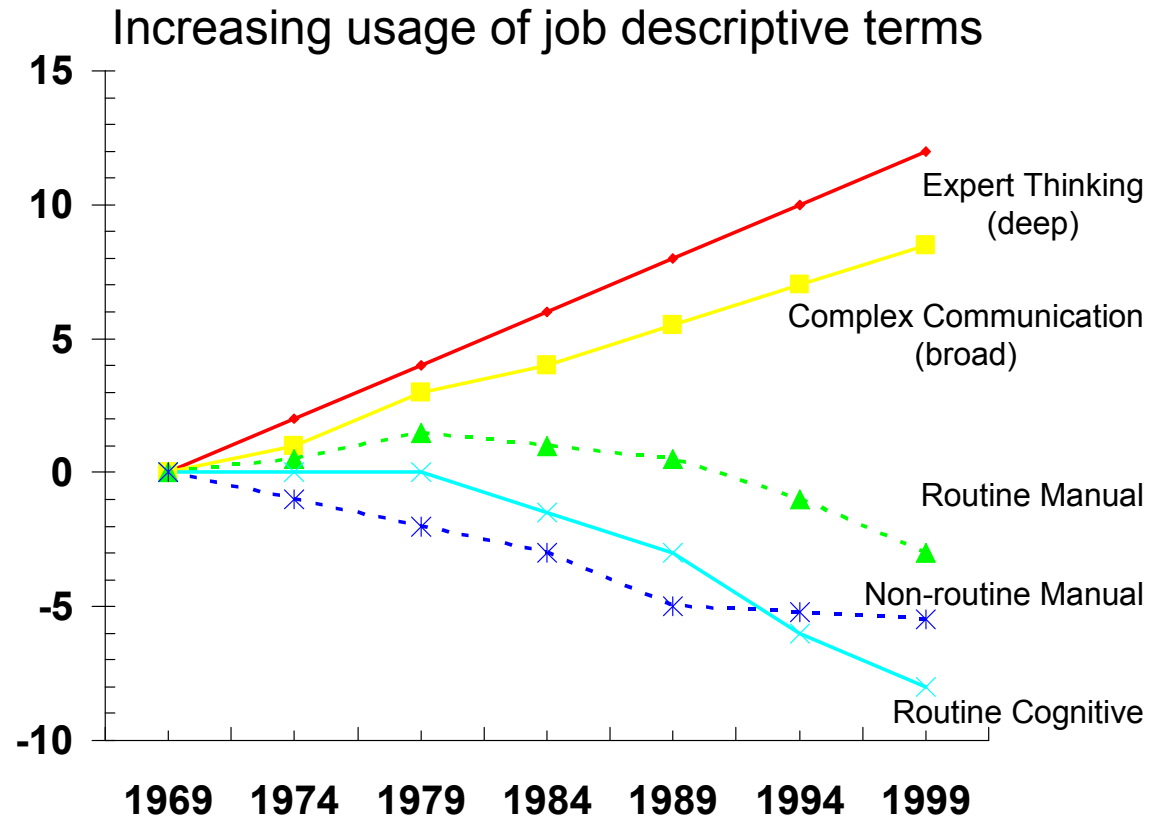
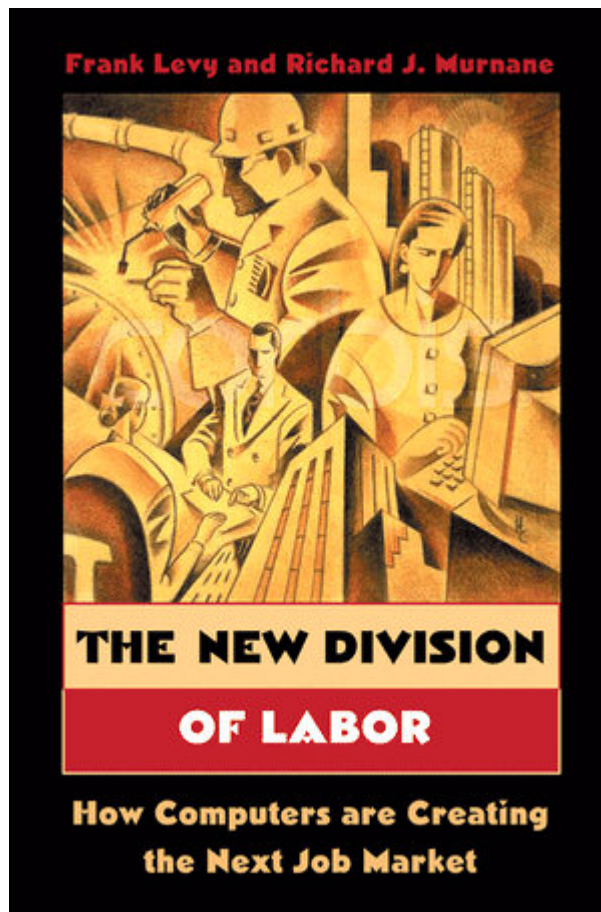


Esempi di servizi

- Trasporti (**Treni, aerei, consegne, etc.**)
- Hospitality (**Hotel, ristoranti, etc.**)
- Infrastrutture (**Comunicazioni, elettricità, acqua, etc.**)
- Governo (**Polizia, Sanità, poste, etc.**)
- Finanza (**Banche, investimenti, etc.**)
- Entertainment (**Televisione, cinema, concerti, etc.**)
- Servizi professionali (**Medici, avvocati, project management, consulenza etc.**)



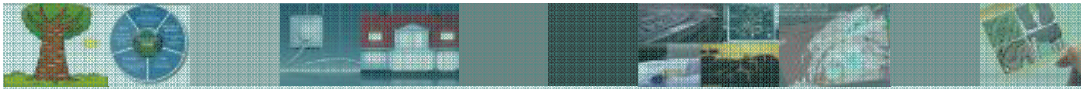
Il cambiamento nella Natura dei lavori



Based on U.S. Department of Labor' Dictionary of Occupational Titles (DOT)

Levy, F. & Murnane, R. J. (2004). *The New Division of Labor: How Computers Are Creating the Next Job Market*. Princeton University Press.

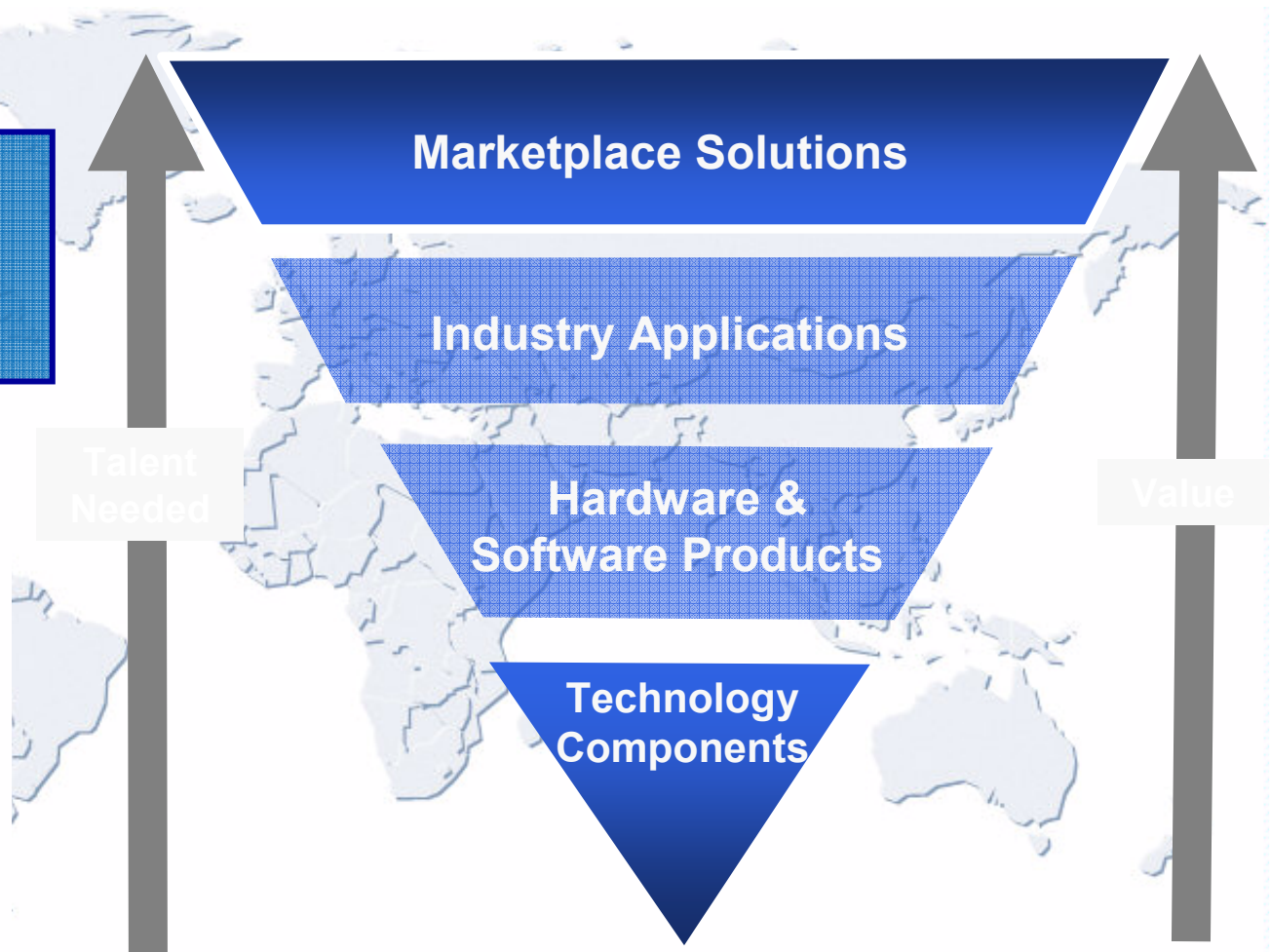




Quali talenti?

Il mercato globale richiede nuove competenze più evolute, interdisciplinari

*"When the world is flat...
the only sustainable edge
you have is your human
talent."*



La formazione sui servizi è interdisciplinare



Science and Engineering

Industrial and Systems Engineering

Computer Science & Info. Systems

Math and Operations Research



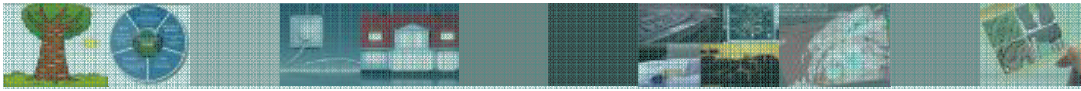
Economics and Social Sciences

Business Anthropology

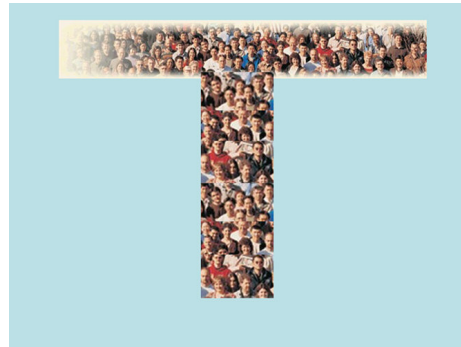
Organizational Change & Learning

Business and Management

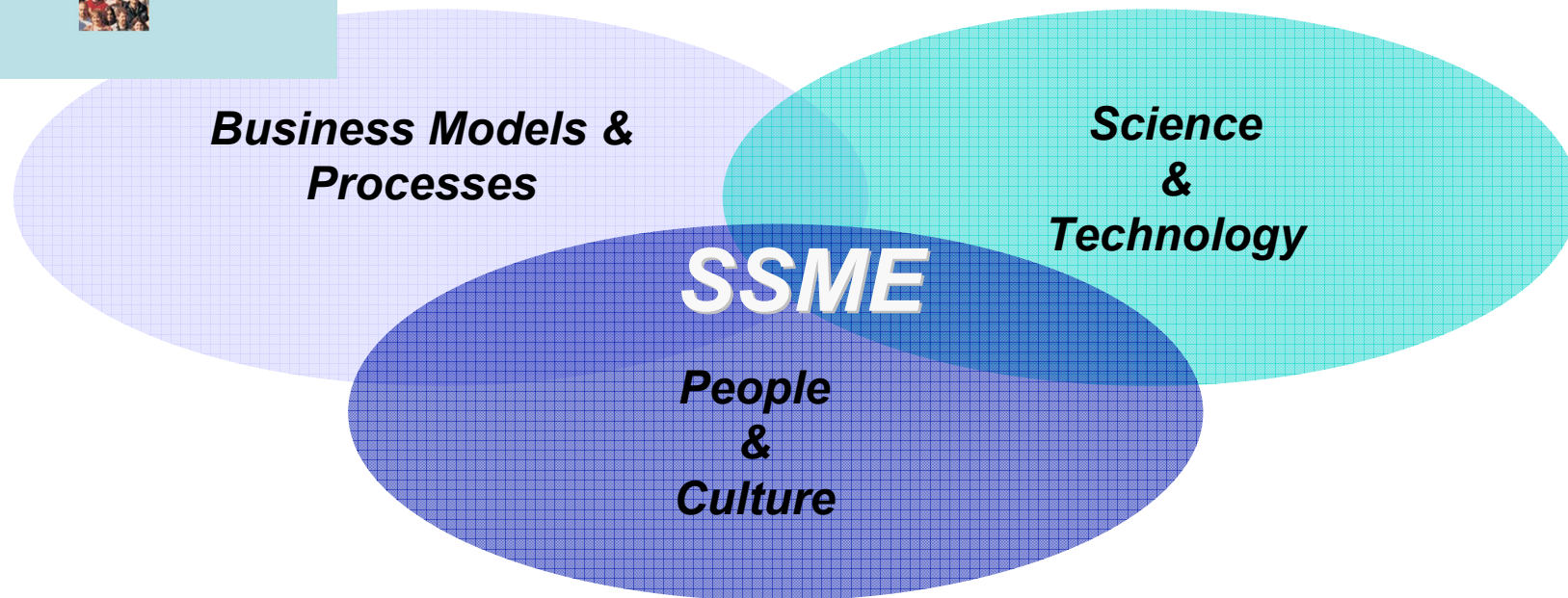
Servono più
persone T-shaped
(persone sia
“profonde”, sia
“larghe”)



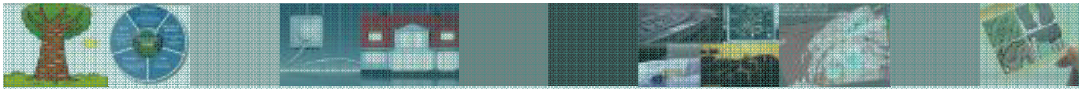
Un tentativo di rispondere al bisogno di evoluzione dei Curricula: Services Science, Management & Engineering (SSME)



2003-2011 ...



Interdisciplinarietà: Il mercato richiede innovazione che combini insieme:
persone, tecnologia, valore e clienti (conoscenza del settore industriale)



Anche in ambito ICT le competenze necessarie stanno cambiando.... *T-shaped*”

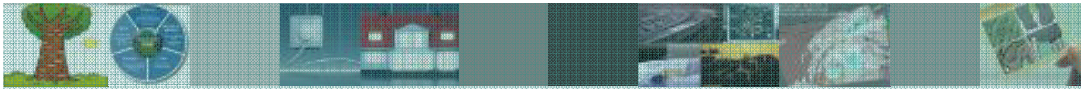
IT Jobs that have been most affected by Global resourcing

- Application Development
- Application Maintenance
- Packaged Application Tools
- Transcription Services
- Contract and Call-Center Staff
- Specialized Business Process Outsourcing Services

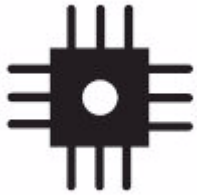
Demand is rising for new IT jobs in areas

- Business Analysis
- Security Analysis
- Vendor Management
- Service Management
- System Integration
- Data Mining
- Business Intelligence
- Database Administration
- Network Engineering
- Network Architecture

- Il valore della formazione aumenta durante i cambiamenti (“economia dei talenti”)
- Sfide e opportunità stanno all’intersezione tra business e tecnologia (tecnologia “embedded” in tutti gli aspetti del business, della società e della vita privata)
- I Curricula devono trasformarsi per riflettere le realtà di oggi e quelle di domani



La complessità aumenta: il pianeta sta diventando ...



INSTRUMENTED

We now have the ability to measure, sense and see the exact condition of practically everything.



INTERCONNECTED

People, systems and objects can communicate and interact with each other in entirely new ways.



INTELLIGENT

We can respond to changes quickly and accurately, and get better results by predicting and optimizing for future events.

MANUFACTURING

IT

CUSTOMERS

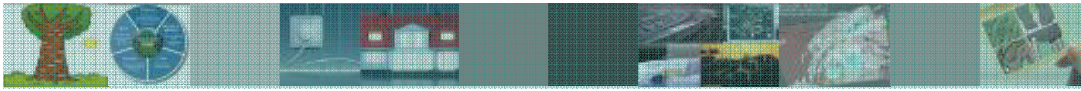
WORKFORCE

SUPPLY CHAIN

TRANSPORTATION

FACILITIES





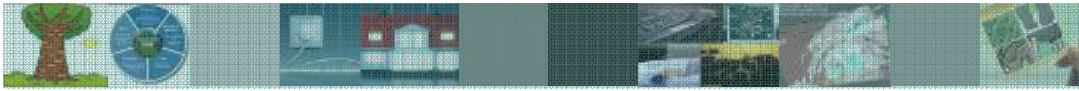
Un nuovo approccio teorico: i sistemi di sistemi ----> Miglioramento della qualità della vita

- **Systems for life-support needs**
 - 1. Transportation & supply chain
 - 2. Water & waste recycling
 - 3. Food & products manufacturing
 - 4. Energy & electricity grid
 - 5. Information and Communication Technologies (ICT)/Cloud
- **Systems for life-style planning**
 - 6. Buildings & construction (Smarter Buildings)
 - 7. Retail & hospitality/Media & entertainment
 - 8. Banking & finance (wealthy)
 - 9. Healthcare & family (healthy)
 - 10. Education & professions (wise)
- **Systems for life-safety governance**
 - 11. Cities & security improvements
 - 12. States/regions & development improvements
 - 13. Nations/NGOs & rules/incentives/policies/laws improvements

Smarter Planet

<http://www.ibm.com/services/us/gbs/bus/html/ibv-smarter-planet-system-of-systems.html>





Service Science and IBM's Smarter Planet Initiative

the study of *complex business and societal systems that serve customers*

...our world today is a diverse *ecology of service systems* that we depend on for life as we know it

More than ever before, quality-of-life is a function of quality-of-service

<http://www.ibm.com/think>



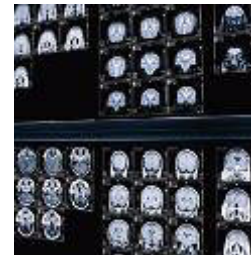
Smart traffic
systems



Intelligent
oil field
technologies



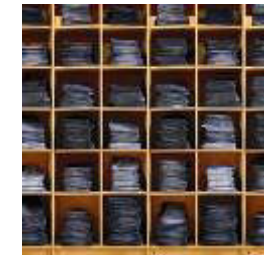
Smart food
systems



Smart
healthcare



Smart energy
grids



Smart retail



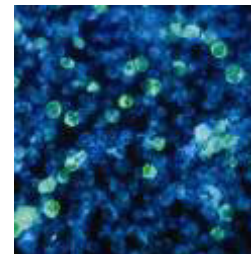
Smart water
management



Smart supply
chains



Smart
countries



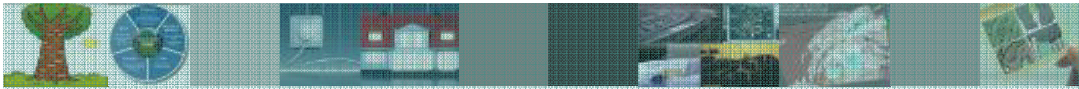
Smart
weather



Smart
regions

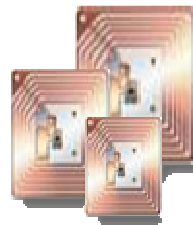


Smart cities



C'è un'esplosione di dati

30 Billion



Capital market
data volumes

1,750% 2003-06



- 220 Terabytes
- 9 Petabytes



2 Billion Internet
users by 2011



4.6 Billion

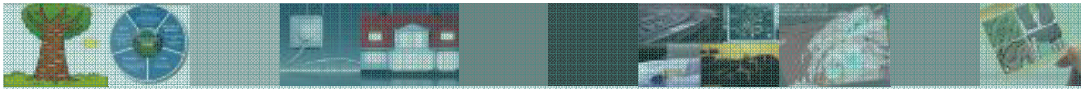
twitter



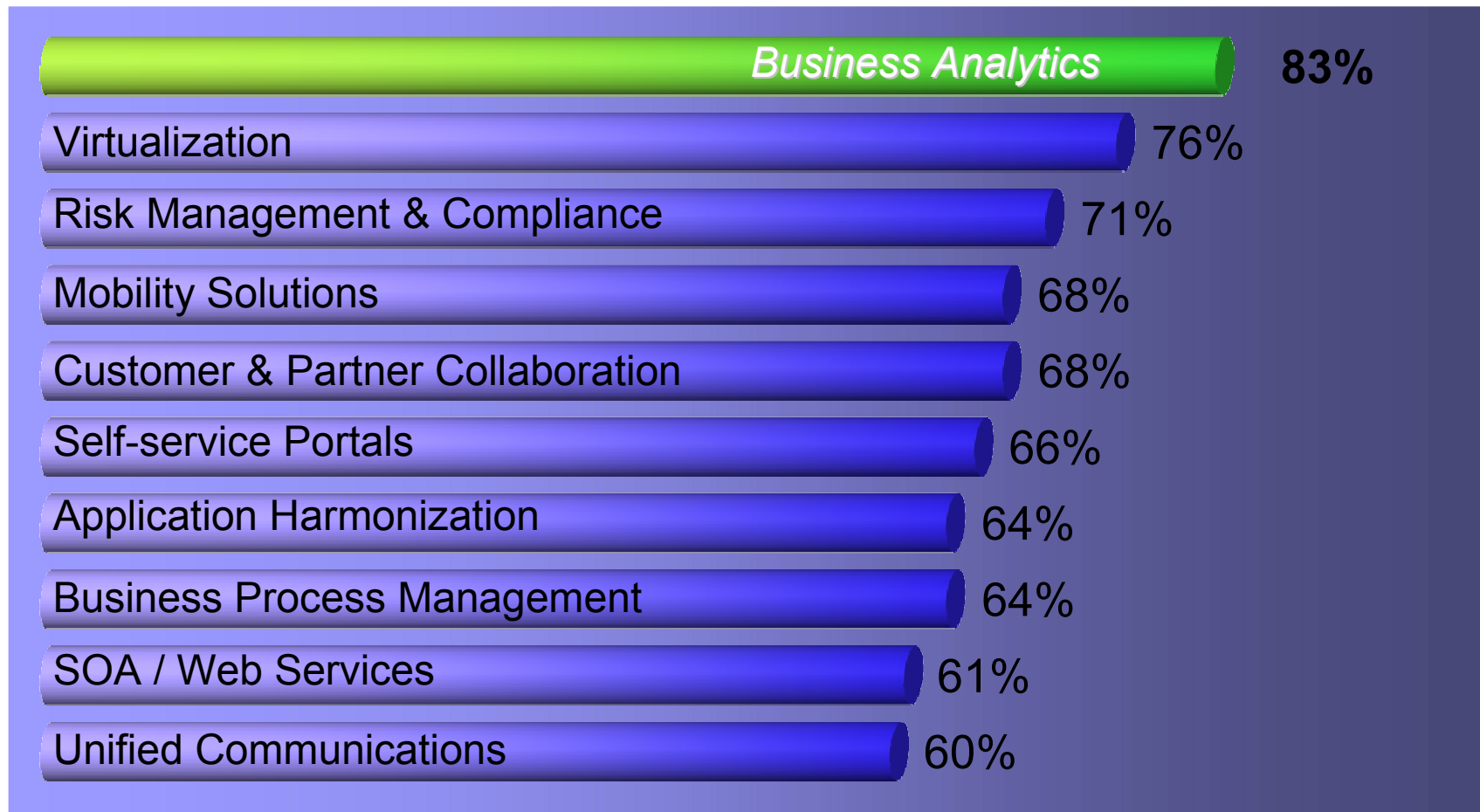
7 terabytes



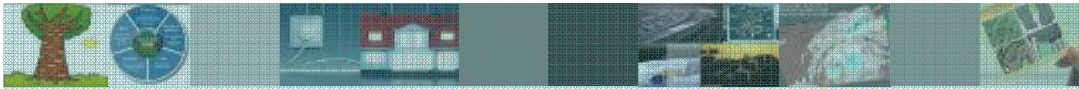
10 terabytes



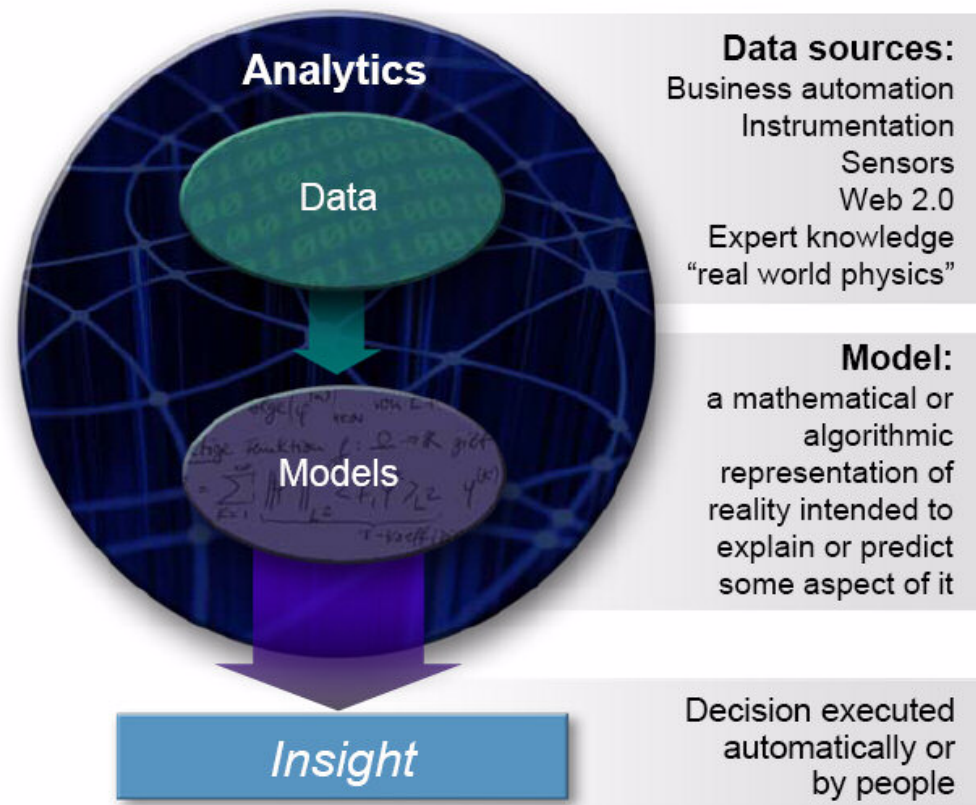
Business Analytics: la priorità dei CIO

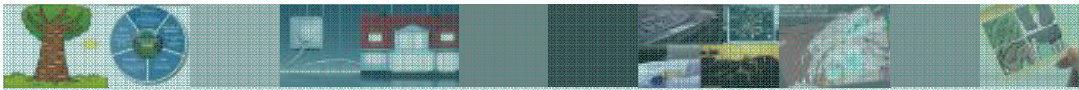


Source: IBM Global CIO Study 2009, n = 2345,

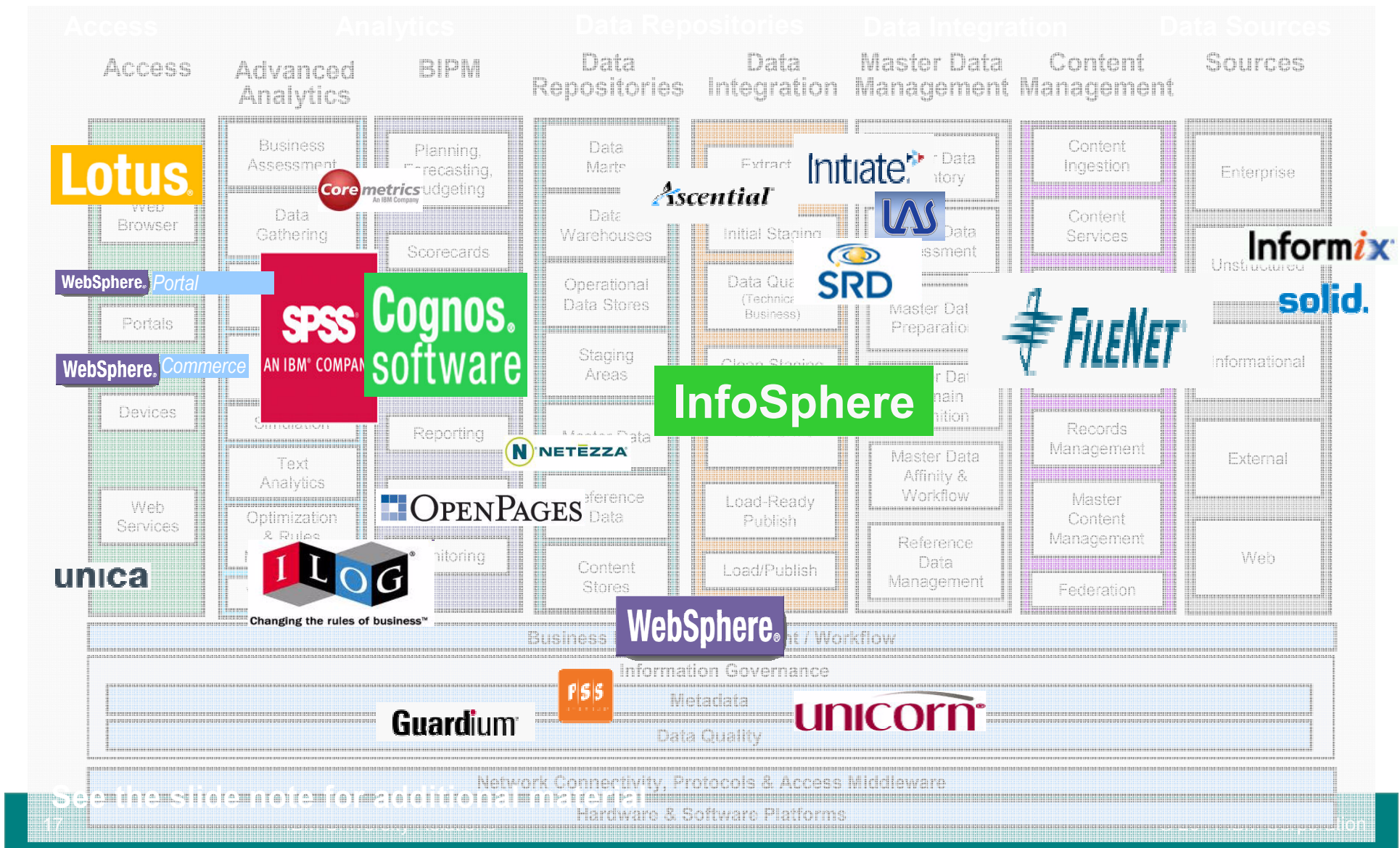


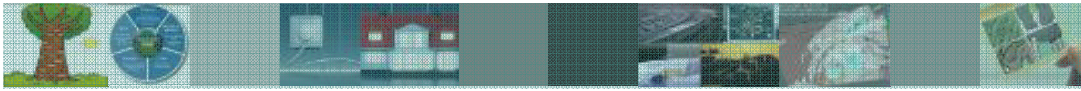
Business Analytics





Una visione parziale delle acquisizioni di IBM per il Business Analytics.....





Esempi di progetti di Ottimizzazione



RealTime Sequencing Optimisation



Vehicle Plant Scheduling



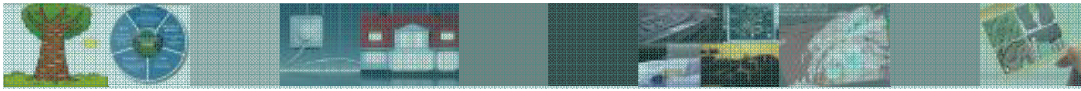
Aircraft Demand Projection & Flight Scheduling



Portfolio Management

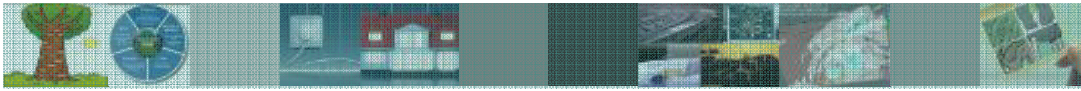


Production planning

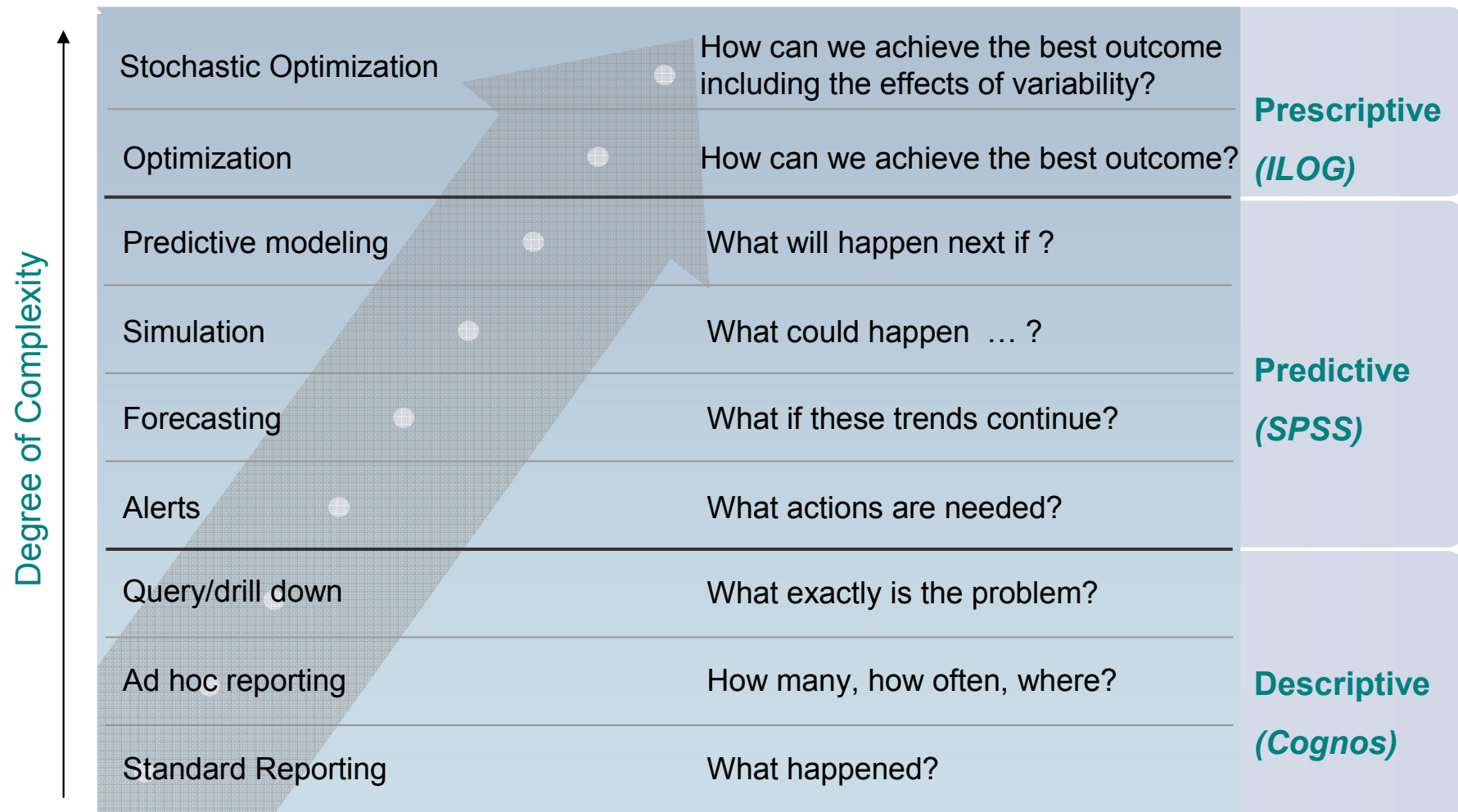


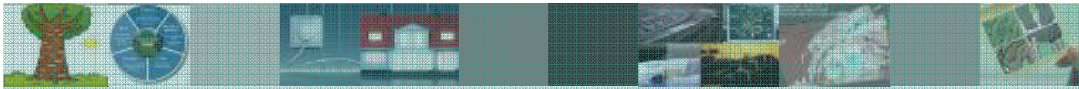
Business Analytics e Optimization: Ruoli e competenze

- **Data Specialist** -Extract, transform, load (ETL), Ascential, data mining, data modeling, Ab Initio, Informatica, customer data integration Metrics
- **Application Architect**- Business intelligence, content management
- **Application Consultant**- Content management
- **Application Developers**- Business intelligence reporting tools, Cognos, content management, FileNet, Teradata, SPSS
- **Project Manager**- Business Intelligence
- **Information Architect** – Business intelligence
- **Business Analyst**- Business Intelligence
- **Package Solution Consultant**- Cognos, BPM
- **Strategy Consultant**- Business Analytics
- **Business Transformation Consultant**- Bus Intelligence, business performance management, strategy, financial performance management and analytics



Analytics and Optimization





Dedication to every client's success.
Innovation that matters—for our company and for the world.
Trust and personal responsibility in all relationships.

IBM has 425,000 employees worldwide



IBM operates in 170 countries around the globe

100 Years of Business & Innovation



21% of IBM's revenue in growth market countries; growing at 13% in late 2010



Number 1 in patent generation for 18 consecutive years ; 5,896 US patents awarded in 2010



9 time winner of the President's National Medal of Technology & Innovation - latest award for Blue Gene Supercomputer

2010 Financials

- Revenue - \$ 99.9B
- Net Income - \$ 14.8B
- EPS - \$ 11.52
- Net Cash - \$11.7B

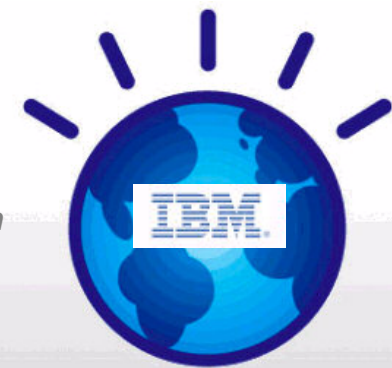


The Smartest Machine On Earth

5 Nobel Laureates

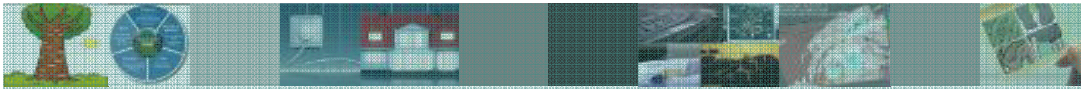


More than 40% of IBM's workforce conducts business away from an office



"Let's Build a Smarter Planet"





Grazie

