

# Measuring Intangibles as part of KM

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*Exploring the promises and pitfalls of the global economic transformation*

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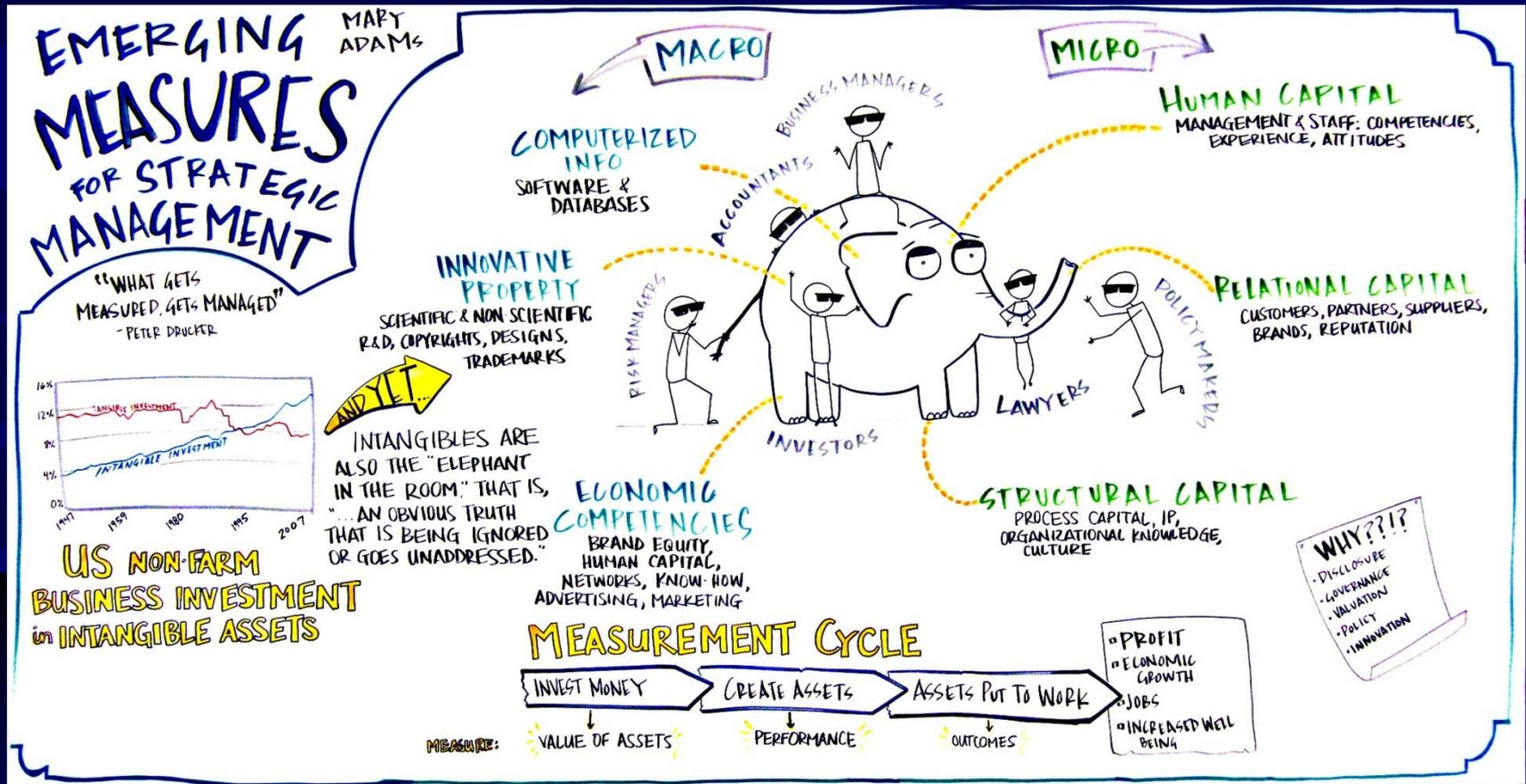
*"We have lots of information technology. We just don't have any information."*

# Not just information, but the 4 knows

- Know-how: skills, practical knowledge; tacit, can be codified in some cases
- Know-what: facts; codified, can be tacit in some cases
- Know-why: science, understanding of underlying principles; codified
- Know-who: relations; tacit and codified

aka **Intangible Capital**

# But there are different views of Intangible Capital



Source: Athena Alliance, *New Building Blocks for Jobs and Economic Growth: Intangible Assets as Sources of Increased Productivity and Enterprise Value* - Report of a Conference, September 2011

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# Accountants' list of intangibles

## A. Marketing-related intangible assets

- (1) Trademarks, tradenames
- (2) Service marks, collective marks, certification marks
- (3) Trade dress (unique color, shape, or package design)
- (4) Newspaper mastheads
- (5) Internet domain names
- (6) Noncompetition agreements

## B. Customer-related intangible assets

- (1) Customer lists
- (2) Order or production backlog
- (3) Customer contracts and related customer relationships
- (4) Noncontractual customer relationships

## C. Artistic-related intangible assets

- (1) Plays, operas, ballets
- (2) Books, magazines, newspapers, other literary works
- (3) Musical works such as compositions, song lyrics, advertising jingles
- (4) Pictures, photographs
- (5) Video and audiovisual material, including motion pictures, music videos, television programs

## D. Contract-based intangible assets

- (1) Licensing, royalty, standstill agreements
- (2) Advertising, construction, management, service, or supply contracts
- (3) Lease agreements
- (4) Construction permits
- (5) Franchise agreements
- (6) Operating and broadcast rights
- (7) Use rights, such as drilling, water, air, mineral, timber cutting, and route authorities
- (8) Servicing contracts, such as mortgage servicing contracts
- (9) Employment contracts

## E. Technology-based intangible assets

- (1) Patented technology
- (2) Computer software and mask works
- (3) Unpatented technology
- (4) Databases, including title plants
- (5) **Trade secrets, such as secret formulas, processes, and recipes.**

# Economist's list

(based on spending)

## Computerized information

1. Computer software: own use, purchased, and custom software.
2. Computerized databases

## Scientific and creative property

3. Science and engineering research and development (costs of new products and new production processes, usually leading to a patent or license):
4. Mineral exploration (spending for the acquisition of new reserves)
5. Copyright and license costs (spending for the development of entertainment and artistic originals, usually leading to a copyright or license): Development costs in the motion picture industry, development costs in the radio and television, sound recording, and book publishing industries.
6. Other product development, design, and research expenses (not necessarily leading to a patent or copyright): New product development costs , new architectural and engineering designs, R&D in social sciences and humanities

## Economic competencies

7. Brand equity (advertising expenditures and market research for the development of brands and trademarks)
8. Firm-specific human capital (costs of developing workforce skills, i.e., on-the-job training and tuition payments for job-related education)
9. Organizational structure (costs of organizational change and development; company formation expenses)

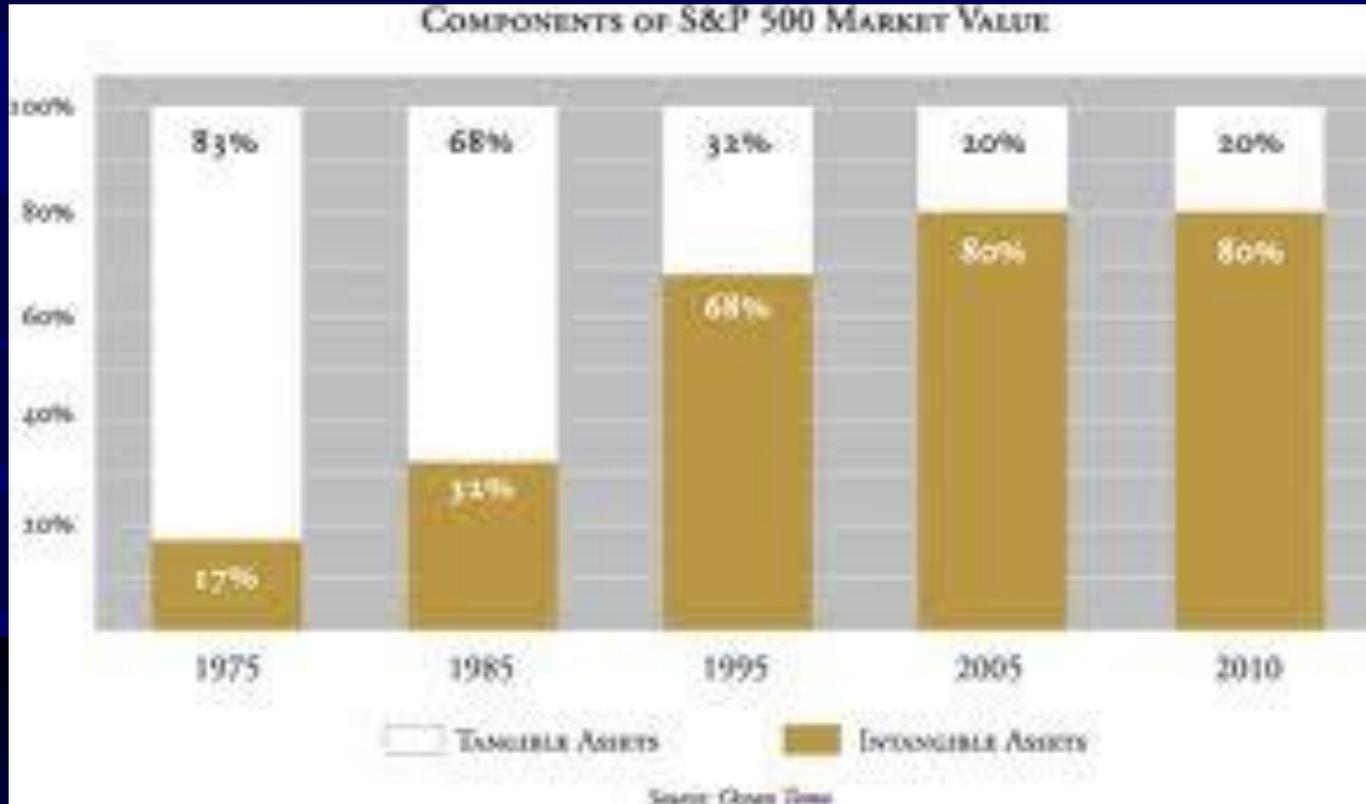
Source: Carol A. Corrado, Charles R. Hulten, and Daniel E. Sichel, "Measuring Capital and Technology: An Expanded Framework," Federal Reserve Board, August 2004, and . . . "Intangible Capital and Economic Growth" NBER Working Paper No. 11948 January 2006

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# Manager's View of Intangible Capital

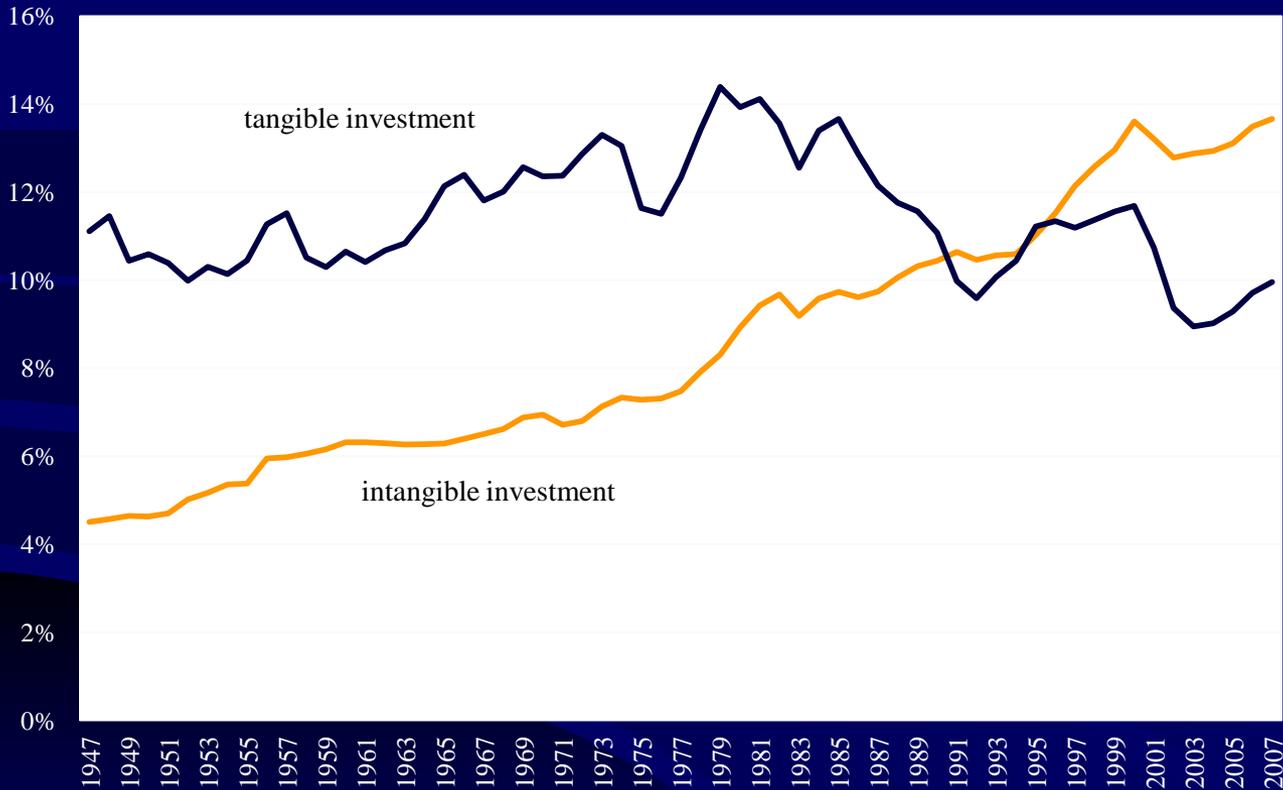


# Intangibles are important to business



# Intangibles are important to business (2)

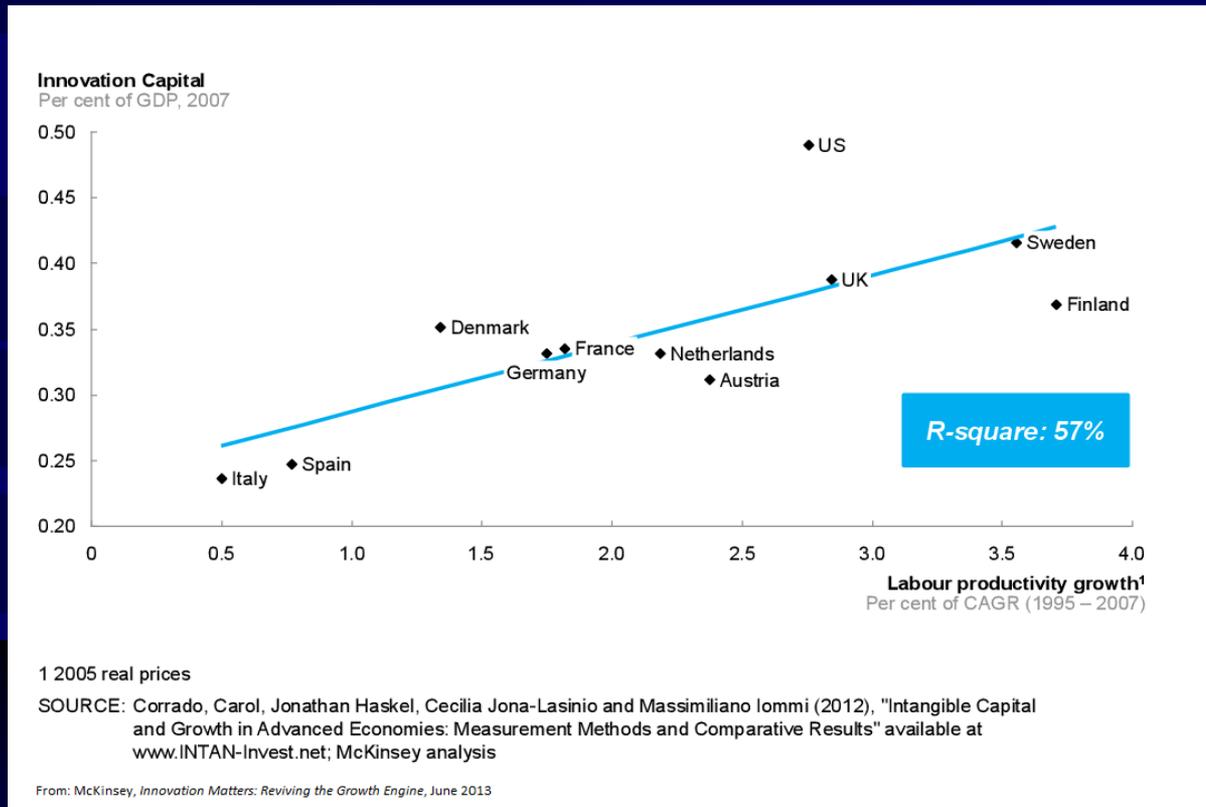
Business investment in the US, tangible and intangible investment (% business output)



Source: Corrado, C.A. and Hulten, C.R. (2010). How Do You Measure a “Technological Revolution”? *American Economic Review* 100:5 (May), 99-104.

# Intangibles are important to the economy

Higher investment in intangibles mean higher productivity



Source: McKinsey, *Innovation Matters: Reviving the Growth Engine*, June 2013

# Intangibles are important to the government

Create and manage for own use

- Training
- Brands
- Databases and software

(see EU SPINTAN Project: Smart Public Intangibles)

Public Investment

- R&D
- Education
- Other

# Overview of Federal Investment in Intangible Assets

Federal Investment in Intangibles (outlays in billions)	FY 2012	FY 2013 CR - estimate	FY 2014 proposed
<u>Information and intellectual property</u>			
R&D funding (not including facilities & equipment)			
Defense	\$75.1	\$75.0	\$71.6
Nondefense	\$63.7	\$64.5	\$64.5
Arts & humanities/museum funding	\$0.9	\$0.9	\$1.0
Government information creation			
Statistical agencies	\$2.6	\$2.6	\$2.7
Weather service	\$0.9	\$0.9	\$0.9
Library of Congress/CBO/GAO/GPO	\$1.1	\$1.2	\$1.2
PTO	\$2.3	\$2.7	\$3.0
<u>Individual Human Capital (know-how)</u>			
Education and training			
Grants to state and local governments	\$63.9	\$62.3	\$76.2
Direct Federal outlays	\$33.0	\$29.8	\$44.6
Training of government personnel (military)	\$11.4	\$11.4	\$11.0
<u>Social Capital (Alliances &amp; Networks)</u>			
Organizational capacity building & technical assistance			
Community (HUD, EDA, USDA)	\$0.7	\$0.6	\$0.8
Company (MEP, SBA)	\$0.3	\$0.3	\$0.4
<u>Brands and marketing - reputation</u>			
Export promotion	\$0.8	\$0.9	\$1.0
Product safety, food safety, drug safety	\$4.6	\$5.0	\$5.6
<b>Total Investment in Intangibles</b>	<b>\$261.4</b>	<b>\$258.2</b>	<b>\$284.4</b>
Nondefense total	\$174.9	\$171.8	\$201.8
<hr/>			
<u>Total Discretionary Outlays</u>	\$1,285.0	\$1,258.0	\$1,242.0
Defense	\$671.0	\$651.0	\$618.0
Non-Defense	\$614.0	\$606.0	\$624.0
<u>Intangibles as percent of discretionary</u>	20%	21%	23%
<u>Nondefense intangibles as % of nondefense discretionary</u>	28%	28%	32%

# Overview Question on Management of Intangibles

## Human Capital

Do your management and employees have the competencies and knowledge needed to successfully exploit your services?

## Structural Capital

Do you have the processes needed to support the operations of this program?

## Relationship Capital

Do you have the right networks to get access to target customers and partners?

## Strategic Capital

Is there a good market opportunity for this program and do you have a business model in place to take advantage of this opportunity?

# Questions on Human Capital

How would you rate the management team's understanding of what it will take to commercialize this program?

How would you rate the management team's knowledge of the industry related to this program?

How would you rate the employees' competencies related to production/delivery of this program?

How would you rate the employees' competencies necessary to renew and continue to build this program?

How would you rate the employees' competencies necessary to support customers of this program?

# Questions On Structural Capital

How would you rate the organization's knowledge base related to this program?

How would you rate the organization's access to related technologies that it will need to commercialize this program?

How would you rate the organization's ability to create an effective process for delivering the program?

# Questions On Relationship Capital

How would you rate the fit between this program and the organization's existing customers?

How would you rate the organization's access to the right prospect group for this program?

How would you rate the organization's access to the right partners to produce and deliver this program?

How would you rate the organization's brand as consistent with this program?

How would you rate the organization's understanding of the target market for the program?

# Questions On Strategic Capital

How would you rate the fit between this program and the organization's existing business model?

How would you rate the organization's ability to create an appropriate business model for this program?

How would you rate the opportunity in the marketplace (strong opportunity usually means fewer incumbent competitors)?

How would you rate the outlook for the market need that this program is addressing?

## For Further Information

[www.athenaalliance.org](http://www.athenaalliance.org)

[www.intangibleeconomy.org](http://www.intangibleeconomy.org)

[www.smarter-companies.com](http://www.smarter-companies.com)