

NSF SES 05-31184

Framing Nanotechnology in the Media

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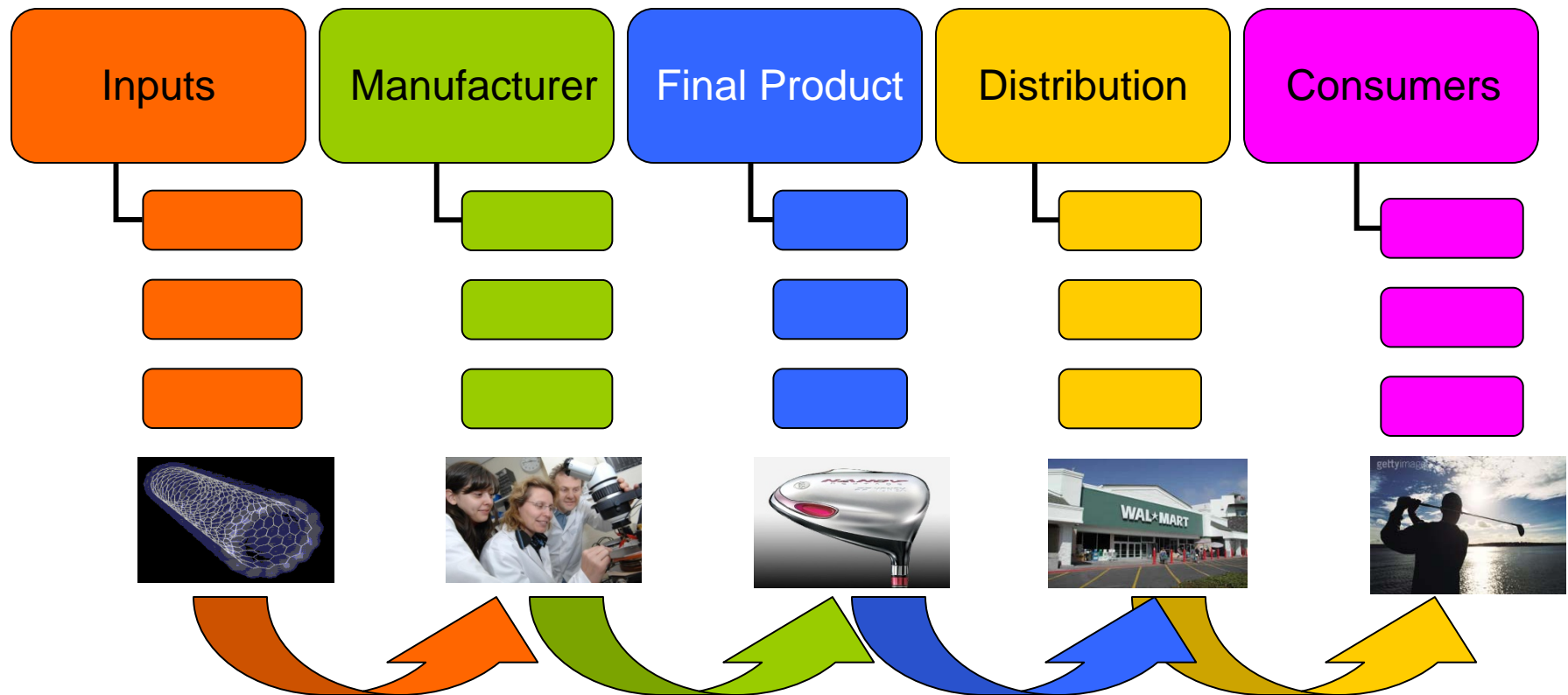
CNS/INSET-UCSB Summer Internship Program

July 30, 2009





What is a Global Value Chain?





Looking for Nano Frames

Positive Response



Negative Response





Media Framing in Nanotechnology

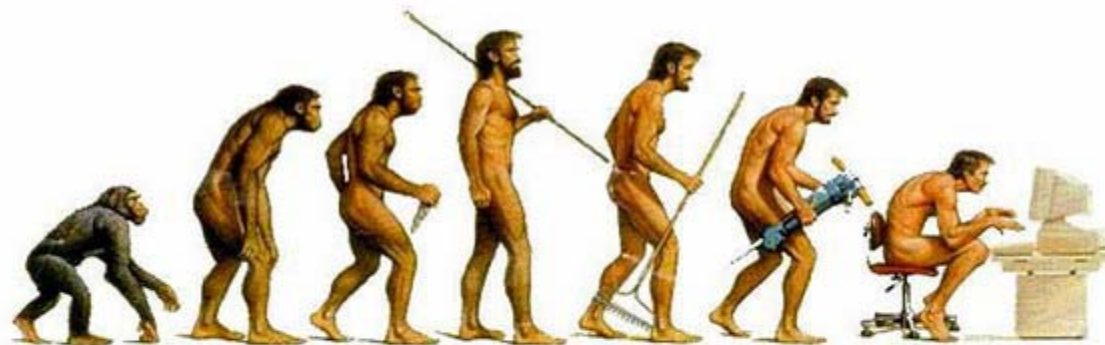
Regulation



Risk



Progress



Regulation Frame

HOUSTON★CHRONICLE

WWW.CHRON.COM

Nanotech's dark side will face scrutiny: House to hear calls to have new materials under review for safety

By Eric Berger, Tuesday, Feb 26, 2008

Progress Frame

THE SUN

San Bernardino County's Newspaper

Nano Design

May Bring Big Results

By *Wesley G. Hughes, Staff Writer*, Monday, Mar 30, 2009

Risk Frame

The New York Times

**In Study, Researchers Find
Nanotubes May Pose Health
Risks Similar to Asbestos**

By Kenneth Chang, Wednesday, May 21, 2008

Research Method and Data Collection: Content Analysis

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Specify date Previous 3 months Jan 30 2008 To Apr 30 2008

Research Method and Data Collection: Content Analysis

Content Analysis- Procedure to validate inferences from text
Hypotheses

Given previous research (Weaver, Lively and Bimber 2008; Pigeon, Harthorn, Bryant and Rogers-Hayden 2009) we have formed the following hypotheses:

- News coverage of energy related nano applications will be dominated by the progress frame*
- News coverage of health related nano applications will be dominated by the risk frame*

CNS-UCSB

Center for Nanotechnology in Society

Random Numbers and Codebook Sample

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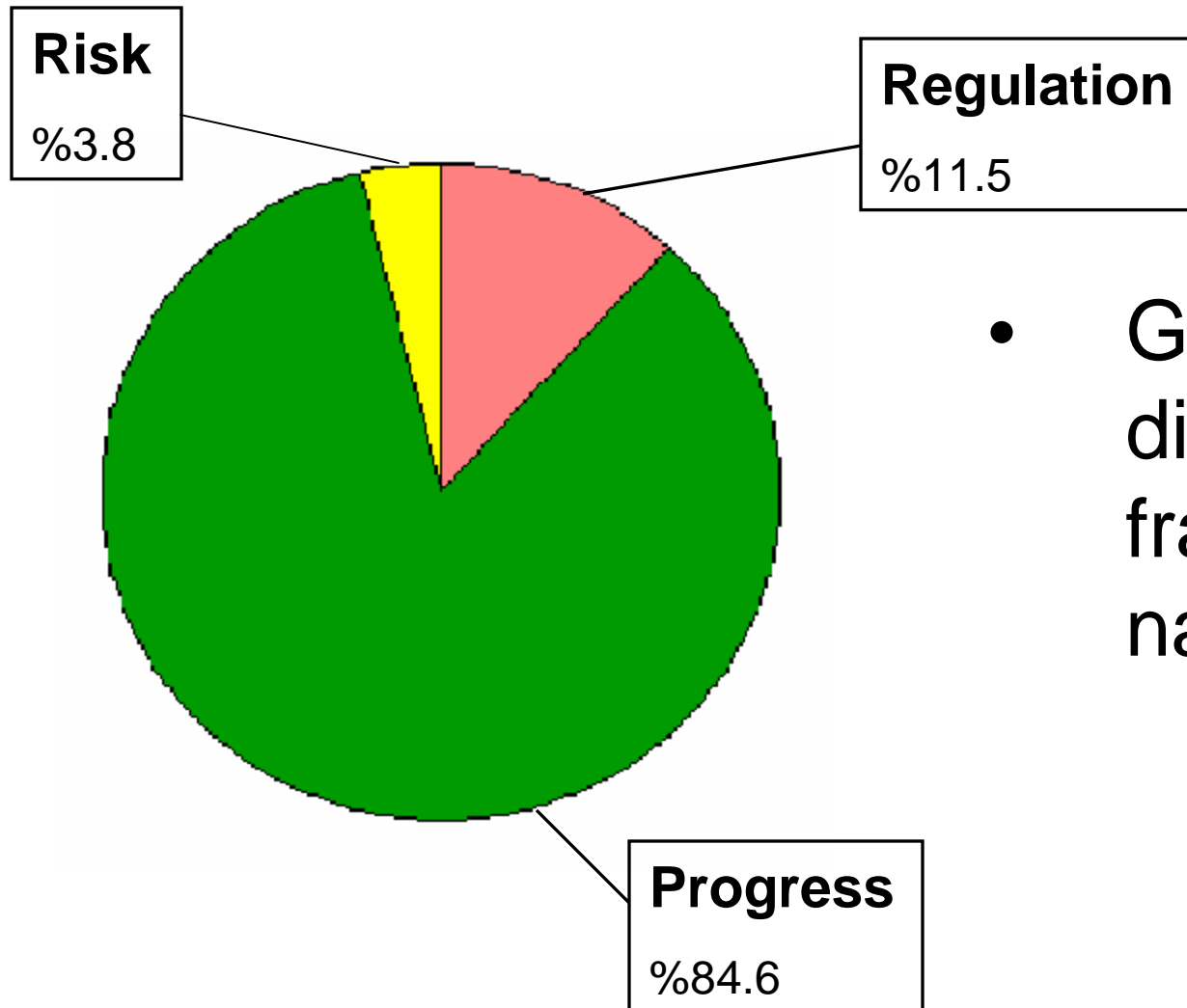
**In Study, Researchers Find
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By Kenneth Chang, Wednesday, May 21, 2008

- Words and information assigned numbers
 - For example:
 - Regulation Frame= 1
 - Progress Frame = 2
 - Risk Frame = 3

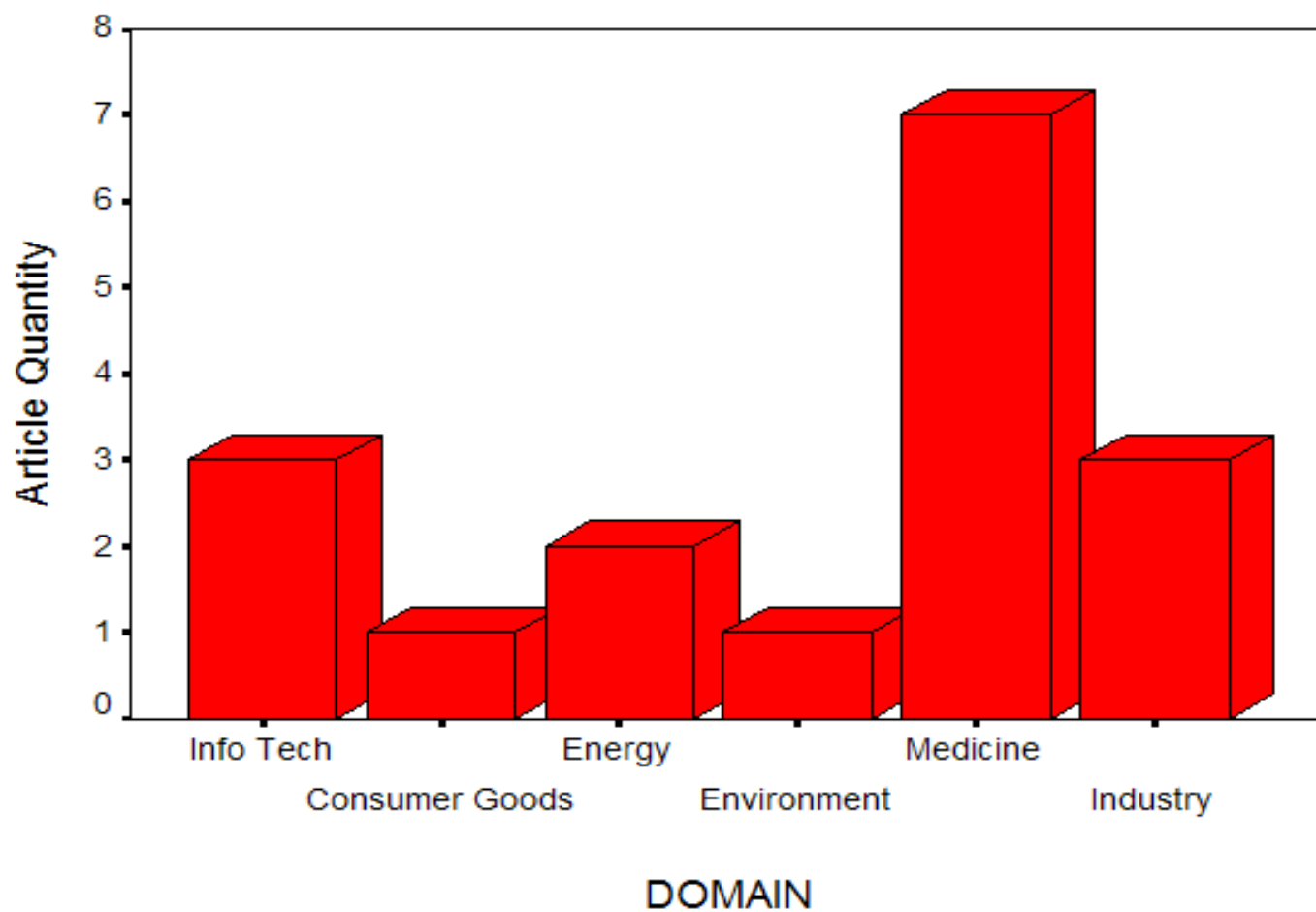


Frame Frequency In Articles

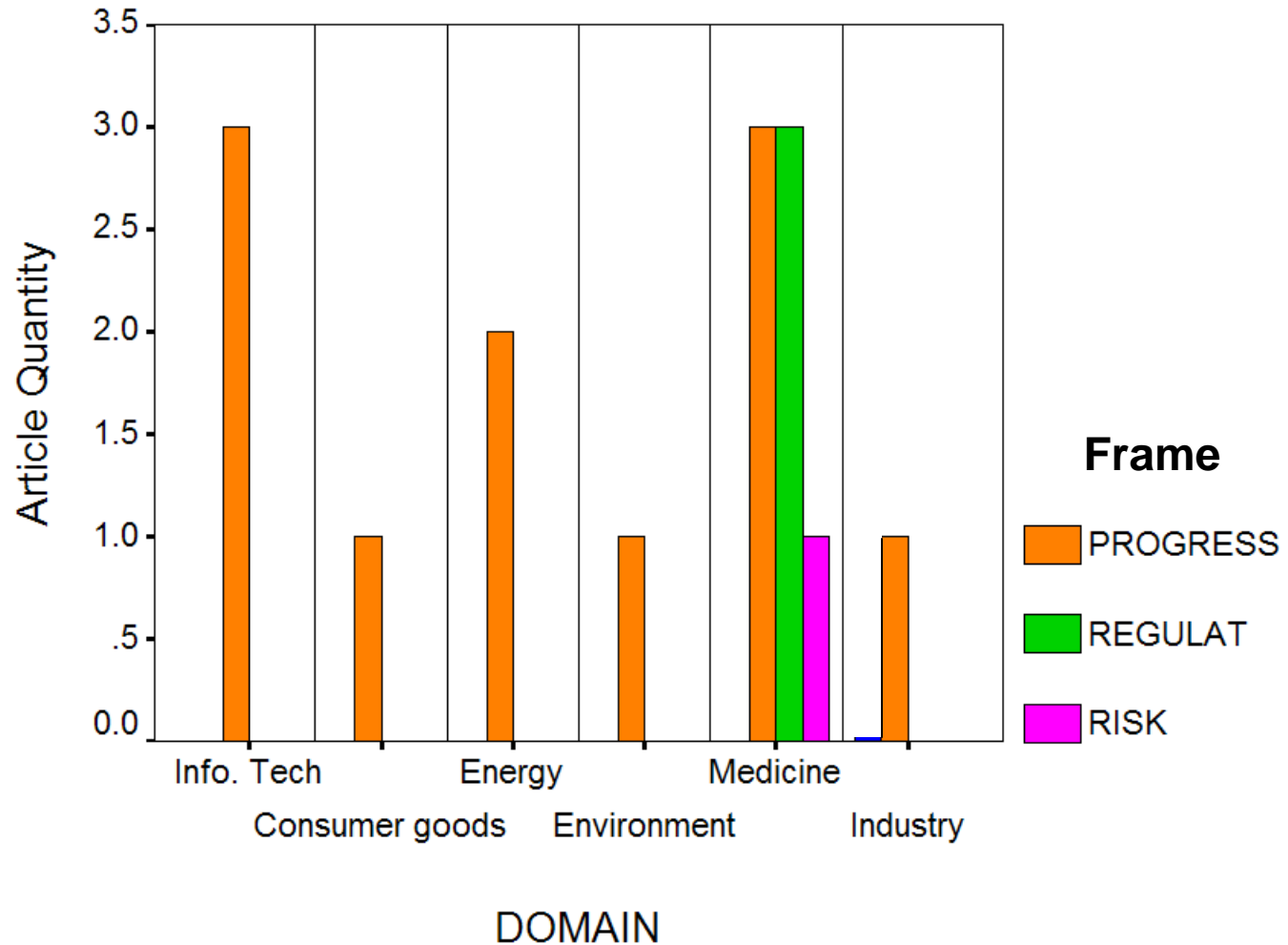


- General distribution of frames in nanotechnology

Domains Found in Articles



Frames in each Domain



Results₊

<u>Domain</u> \ <u>Frame</u>	Regulation	Risk	Progress
Medicine	10.95**	3.40**	4.34**
Environment	.115	.036	.376
Info Tech	.513	.159	1.678
Consumer Goods	.115	.036	.376
Energy	.238	.074	.779
Industry	.370	.115	2.727**

+ report of Chi Squared statistic

Critical Value of $\chi^2 = 2.706$, degrees of freedom = 1, $p < .1$ ** or to say, 90% certainty

Conclusions:

- In nano, there is more focus on medicine
- There is competition between frames, particularly in medicine
- May cause difficulty for medical progress and industry
- May hinder progress in other areas energy or environment
- We could research medicine domain more closely



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Acknowledgments and Thanks!



**Meredith Conroy
Bruce Bimber
CNS/INSET
UCSB/SBCC**





Relationship Between Domain and Frame Using a Chi-Squared Statistic

Are the variables truly correlated?

OR

Are they associated merely by chance?



Obverse

Reverse

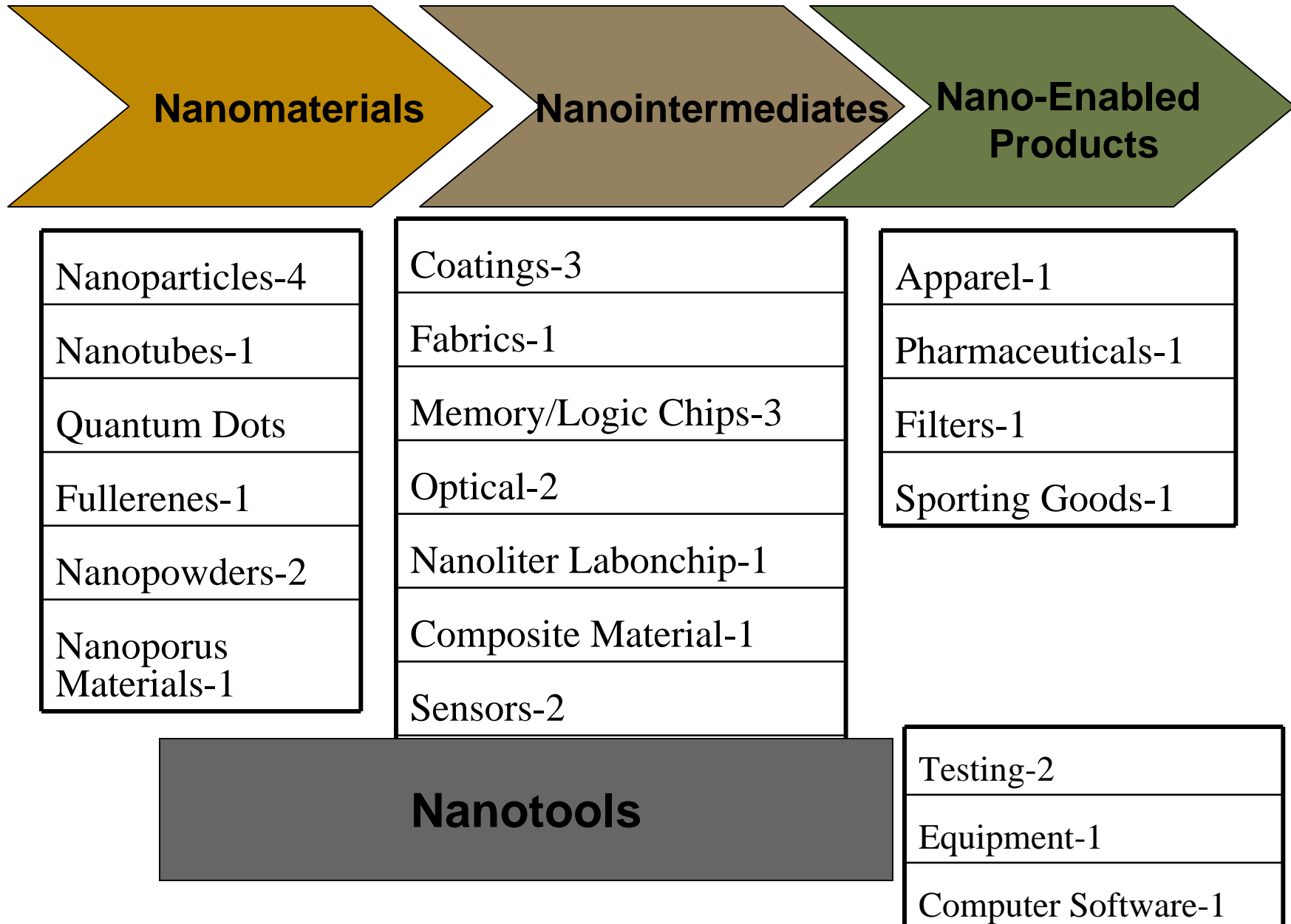
Expected- 5/10 Heads

Observed- 6/10 Heads

7/10 Heads

9/10 Heads

NC Companies by Product & Value Chain



Media Framing of Nanotechnology

Random Number Generator

<http://stattrek.com/tables/random.aspx>

Articles Relating to Each Domain

