



Ministère de l'Education Nationale, de l'Enseignement Supérieur et de la Recherche

From Basic Research to Innovative Applications through Evaluation.

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Funding research

- 3 areas
 - Basic Scientific Research
 - Basic Technological Research
 - Innovative Application Development
- A research support model
- Implementation in France for Language Technologies

Basic Scientific Research

- **Examples**
 - Laboratory annual funding, including researchers salaries
 - NSF programs
 - Evaluation based on publications
- **Advantages**
 - Open to new ideas
 - No time pressure
 - High risk / big return
- **Problems**
 - Lack of quality measures
 - ARPA SUS program (1971-1976)
 - The Martine Kempf case (1984)

Basic Technological Research

- **Examples**

- NATO RSG10 initiative (1980)
- DARPA-NIST initiatives (1984/1987-)
 - Annual evaluation campaigns
 - Opening to international participation (1992)
- Quantitative technology evaluation

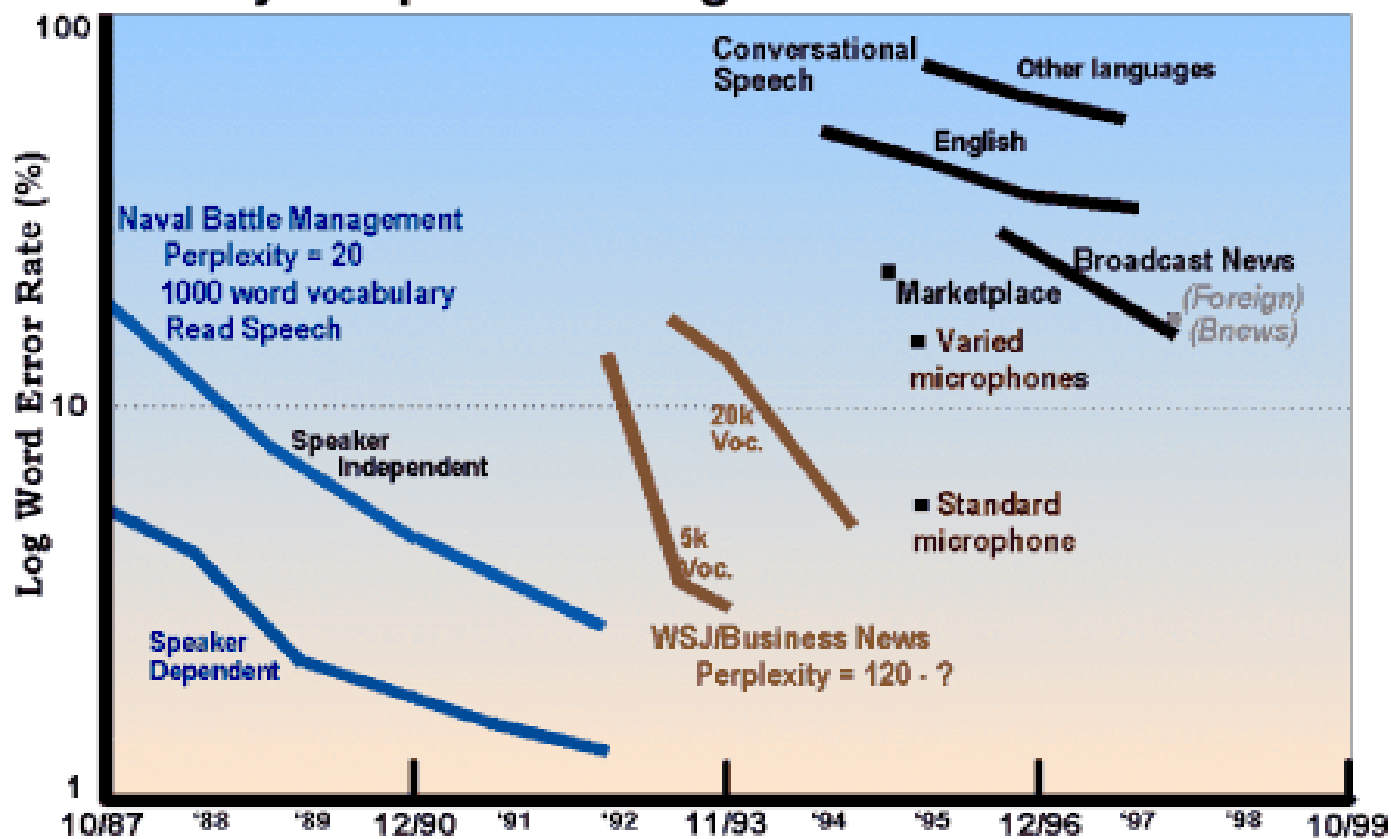
- **Advantages**

- Know where we are and how fast we progress
- Helps choosing the best approach
- International quantitative comparison
- Research funding monitoring

- **Problems**

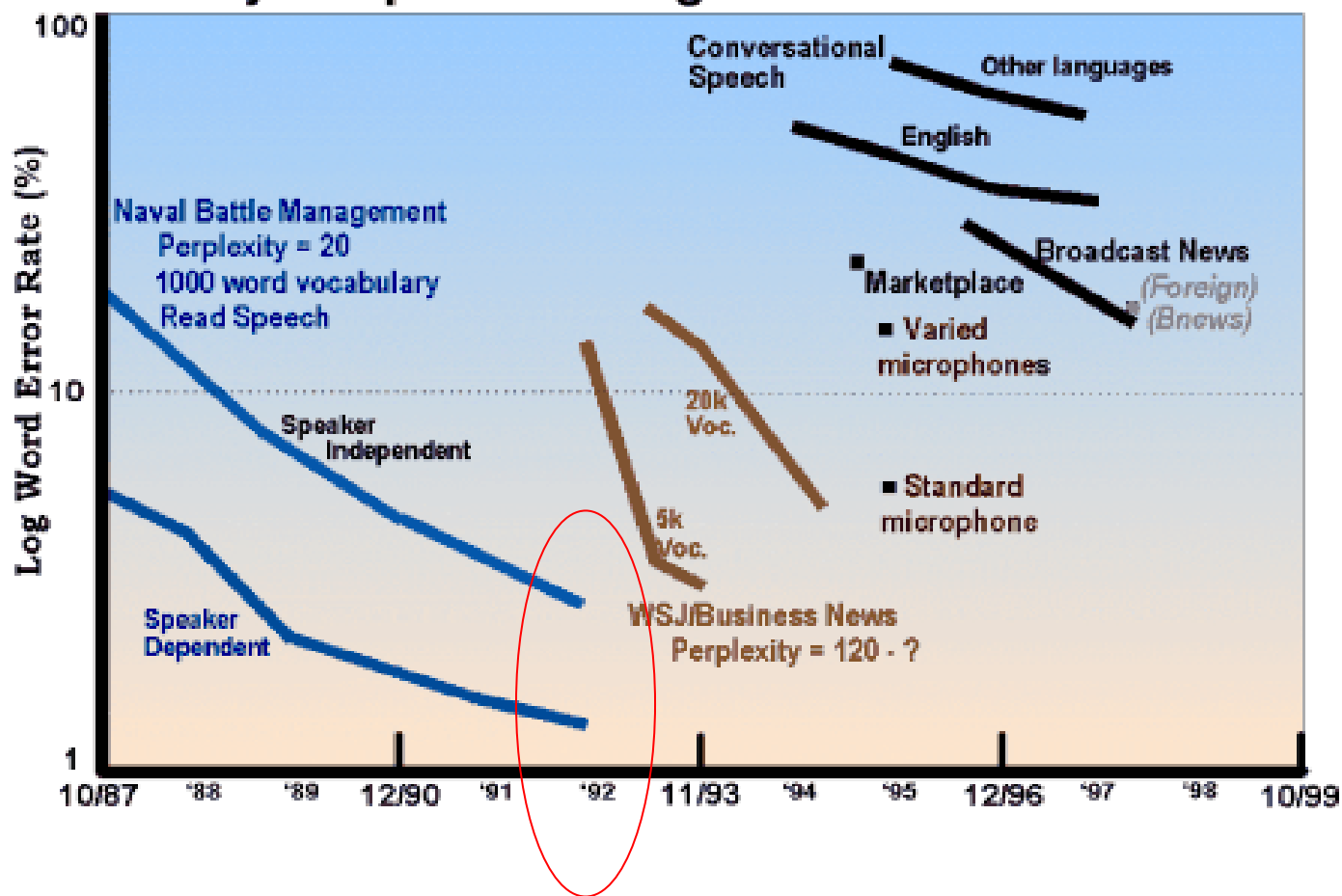
- Permanent stress preventing from developing new ideas
- Homogeneity of approaches

History of Speech Recognition Benchmark Tests



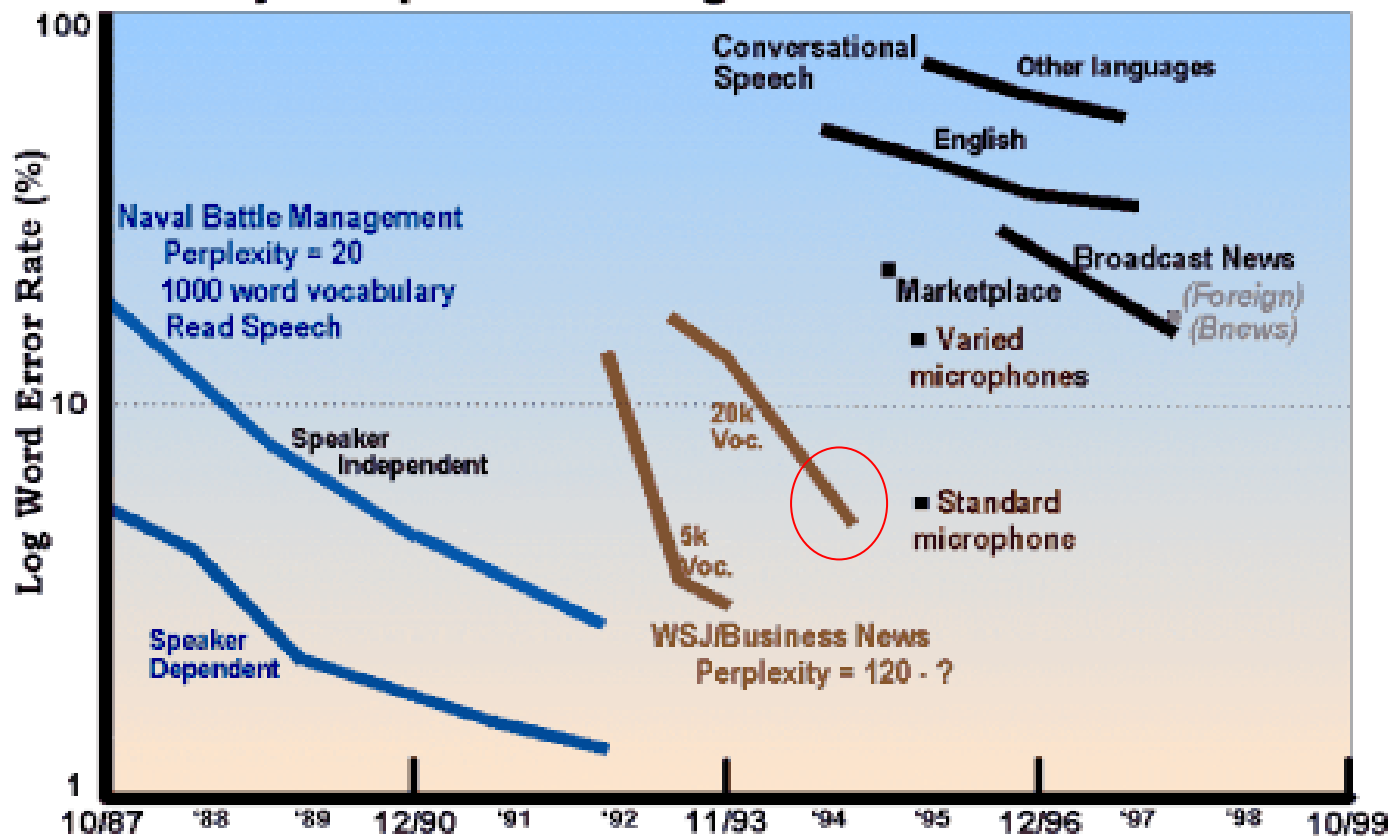
Courtesy NIST

History of Speech Recognition Benchmark Tests



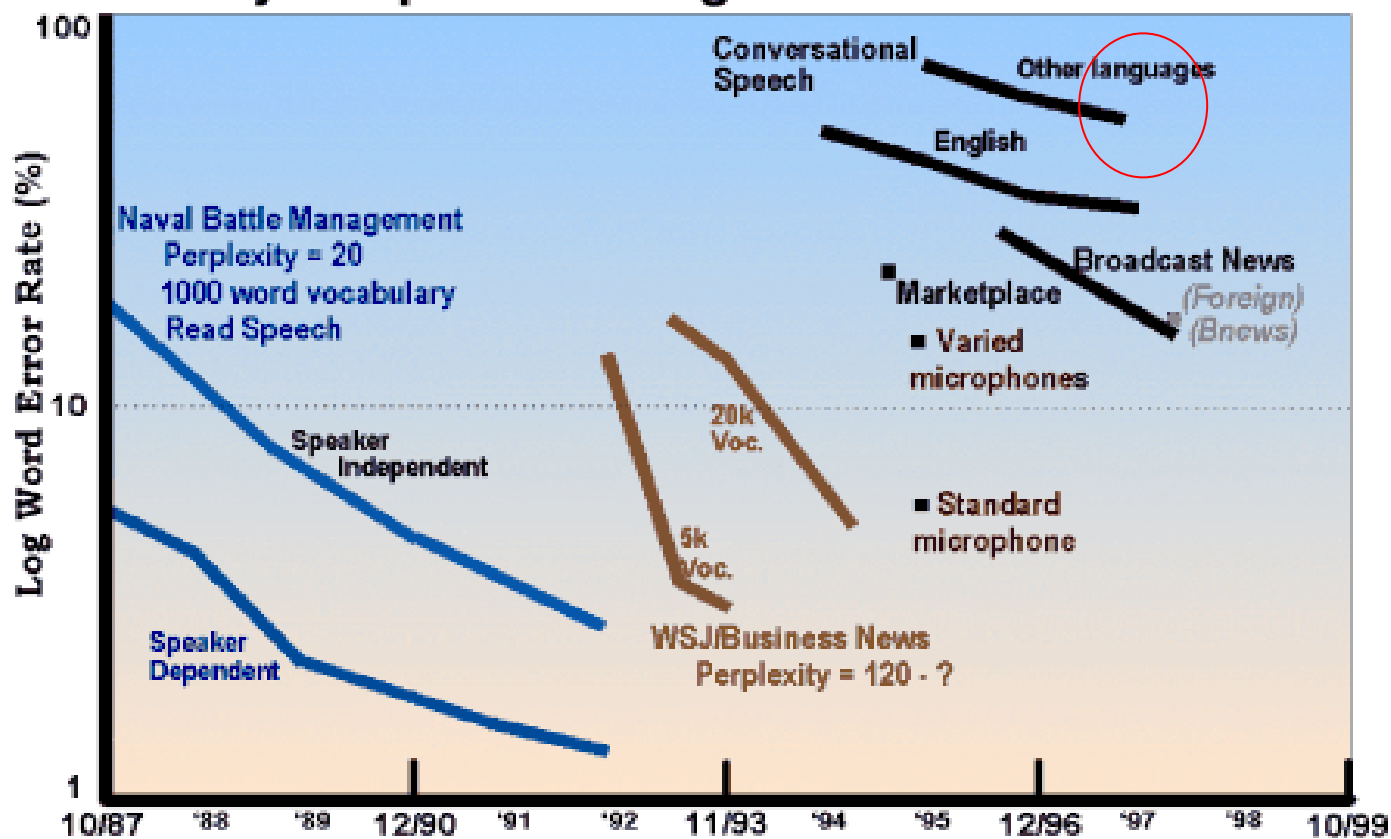
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History of Speech Recognition Benchmark Tests



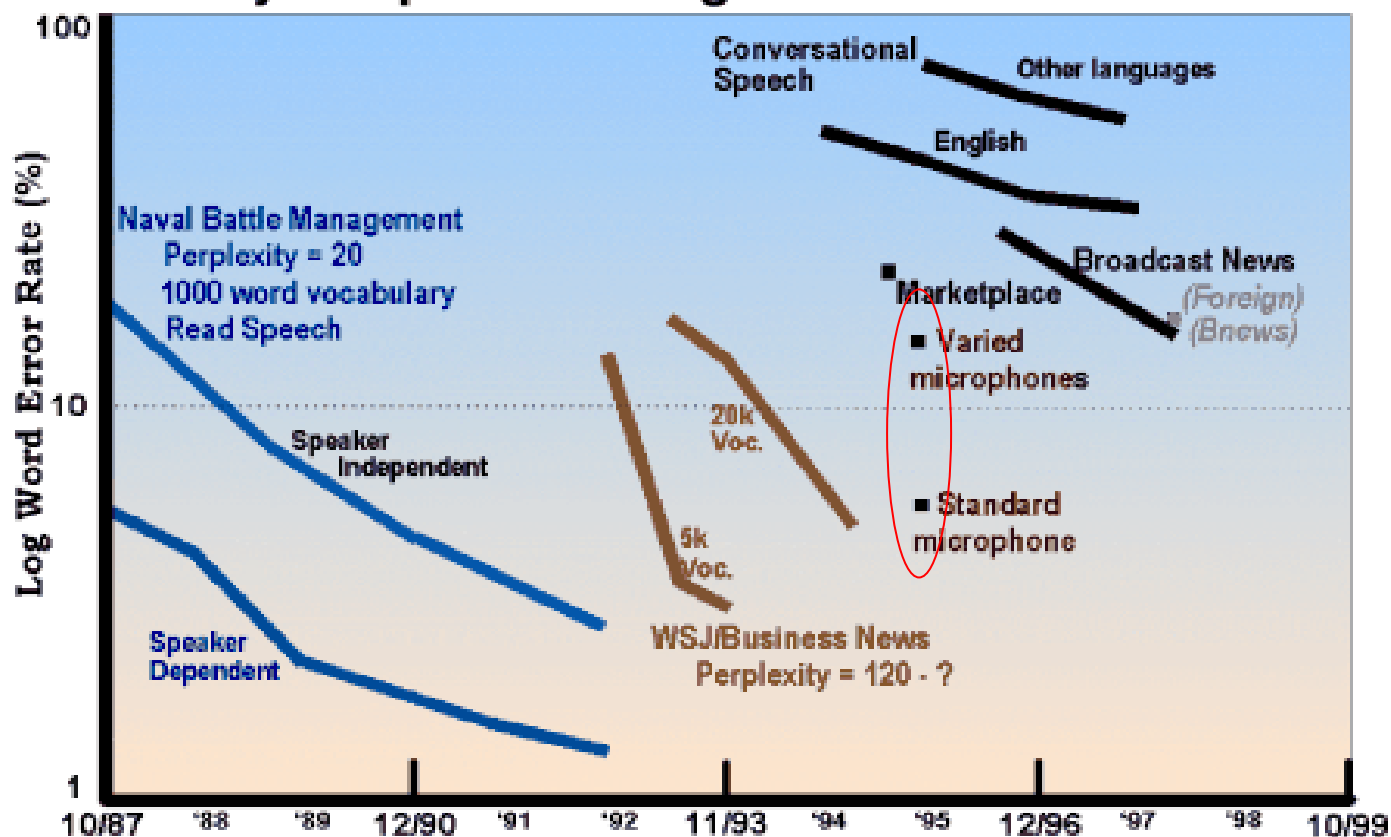
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History of Speech Recognition Benchmark Tests



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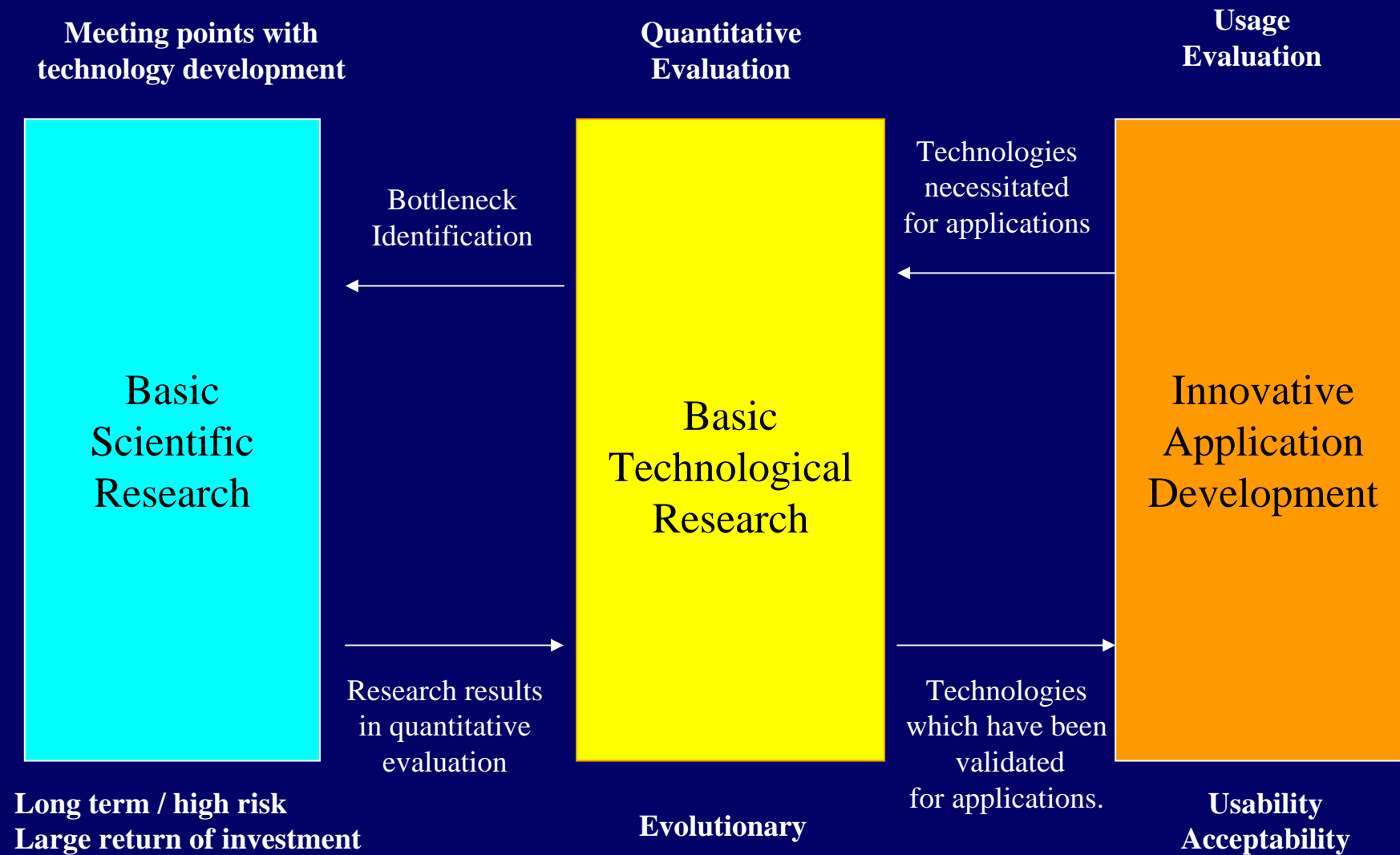


Courtesy NIST

Innovative Application Development

- **Examples**
 - EC programs
 - Collaborative projects FP1-FP6
 - Technological Research and Innovation Networks (RRIT)
 - Evaluation of usability/acceptability
- **Advantages**
 - Research-industry cooperation
 - Demonstration of results
- **Problems**
 - The « 99%+ correct » commercial claims
 - Technology not yet good enough to fulfil the (even « sexy ») application requirements (waste of money)

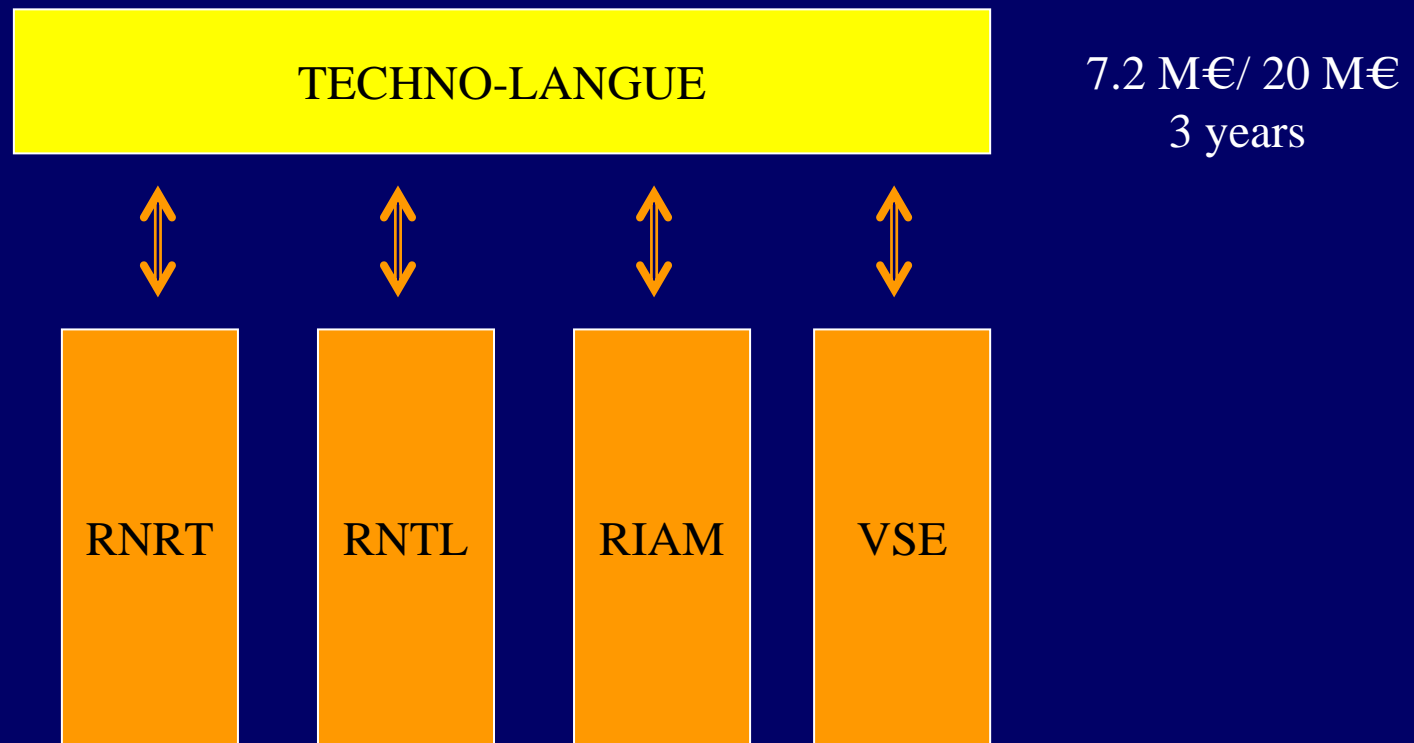
Research Support Model



National French Programs

- Funding all 3 areas
- **Basic Scientific Research**
 - Funding of Universities and Institutes (CNRS, INRIA...)
 - Basic Research Actions (ARA)
 - « White » program
- **Basic Technological Research**
 - (AUF ARCs (1994))
 - Techno-Langue (2002) : 8 evaluation campaigns
 - Techno-Vision (2004) : 10 evaluation campaigns
 - Techno-Langue II (2006) ?
- **Innovative Application Development**
 - Technological Research and Innovation Networks (RRIT)

Techno-Langue infrastructure



Infrastructural program to support innovative core technologies development, while existing R&D application projects stay with RRIT & VSE (120 M€/ year)

ESTER

- **Broadcast News Transcription and Indexing Evaluation**
- **Evaluation (Final Workshop March 30-31, 2005)**
 - 13 participants (3 companies)
 - Written transcription (RT / non RT)
 - Segmentation (speech/sound, speaker recognition / diarization)
 - Named Entity recognition (from speech / transcribed text)
- **Language Resources as a by-product**
 - 100 h manually transcribed (1 MW, 350 speakers) + 1600 h untranscribed
 - Distribute Evaluation Package
 - Development and Test data, scoring, results. Data used in EASY.
- **Workshop for linguists (May 12, 2005)**
 - Data and tools available, Results
 - Open issues necessitating Basic Scientific Research investigations
- **Public presentation (RRIT, Administrations) (Spring 2006)**

Proposal for a EU LT Program

