

# THALES

RESEARCH & TECHNOLOGY (UK) LTD



## **Collaborating with Academia – A Personal View**

*Chris Firth – Chief Scientist  
Thales Research & Technology (UK)*

---

- About Thales
- Setting the Scene
- Why do Companies collaborate with Universities?
- Means of collaboration
- Possible tensions
- Benefits to both parties



## ■ Three Core Businesses in Six Divisions

- Aerospace & Space (25%)
- Defence (50%)
- Security (25%)

} €12.7 bn annual revenues

## ■ Four Research Centres – Thales Research & Technology

- France, UK, Netherlands, Singapore

## ■ A Worldwide Group

- 68,000 employees worldwide
- Presence in 50 countries

World leader for mission-critical information systems

Increasingly pressured budgets in companies and universities

It has been shown that companies that collaborate with Universities typically have double the business performance than companies that don't

Many research intensive companies are moving from a system where most of their R&T would have been done "in-house" to one in which they are actively seeking to collaborate with others in a new form of Open Innovation.

# Why do Companies Engage with Academia?

## Technical Research

- Problem solving capabilities
- Access to expertise and relevant scientific & technical knowledge

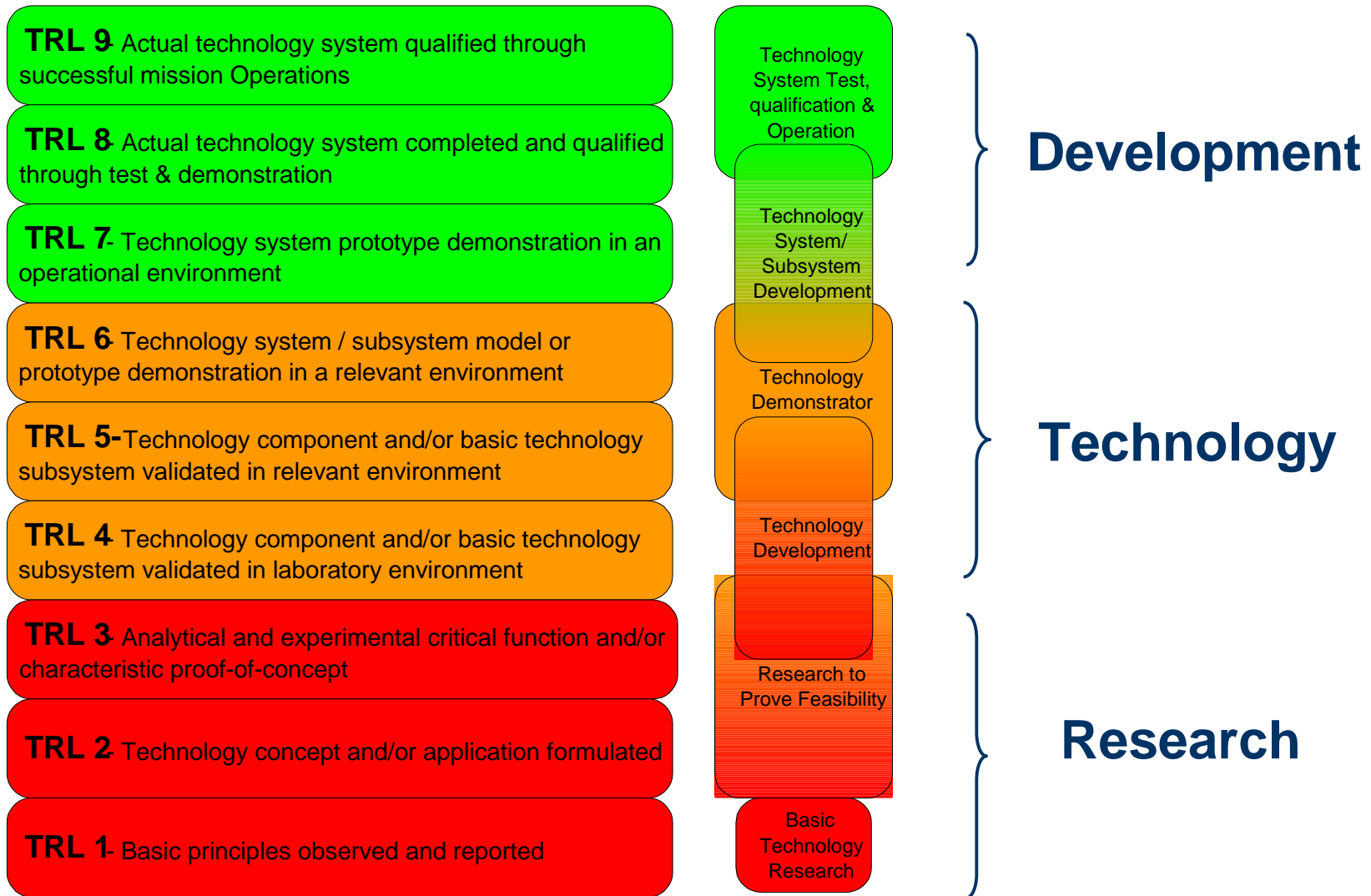
## Continued Professional Development of Staff

- Continued learning & development of expert staff
- Build credibility as an expert supplier

## Recruitment

- Opportunities to recruit highly qualified staff
- Advantage in the competition for the best graduates

# Technology Readiness Levels - TRL



April 2009

## Collaborative Projects (CP)

- Working together on specific projects in FP7, TSB etc

## Strategic Alliance (SA)

- Funding specific theme based research activities

## Industrial Clustered (IC)

- Pre competitive research defined and steered by an Industrial grouping but undertaken by University e.g. MVCE

## Contract Research (CR)

- A specific research contract

## Student Projects (SP)

- Sponsoring specific PhD (CASE) or MSc projects

## University Projects (UP)

- Supporting specific, usually RC funded, projects

# Summary of Technical Research Engagement



	TRL	Timescale	Cost to Industrial	IP	Leverage	Hassle
CP	1 to 5	up to 3 yrs	Staff time	contract	2:1	high
SA	1 to 4	typ 3 yrs	Can be high	contract	2:1 possible	medium
IC	1 to 5	up to 3 yrs	~£50k/yr	contract	high	low
CR	1 to 5	Depends on contract	Can be high with FEC	company	low	medium
SP/D	1 to 3	3.5 yrs	£8k/pa	contract	3:1 with CASE	low
SP/M	4 to 5	3 months	Staff time	student	-	low
UP	1 to 3	up to 5 yrs	Staff time	university	-	low

CP = Collaborative Projects  
 SA = Strategic Alliance  
 IC = Industrial Clustered  
 CR = Contract Research

SP/D = Student PhD Projects  
 SP/M = Student MSc Projects  
 UP = University Projects

April 2009





## Specific Training

- An increasing number of universities are providing short courses or part time MSc to company employees.

## Visiting staff functions

- Professors
- Researchers
- Lecturing
- External examiners

## Short term staff secondments

- Academics to industry
- Industrials to academia

## Peer review college

- Proposal reviews for research councils

## Advisory Panels

- Advising industrial needs in to curriculum development
- Early indication of student numbers and application trends

## Activities with Students

- Career Talks
- Project Prizes
- Summer Placements

## Company Image

- Brand awareness
- Co-ordinate with other activities



## Contrasting Missions

- Role of business to make profit – role of academia to teach & further science
- Tension between publishing work and protecting IP
- Industrial short term concrete outcomes Vs Academic longer term loose outcomes

## Culture Differences

- Personal research agendas for academics
- Corporate sponsored research could be seen to cloud independence of academics

## Full Economic Costing

- Now making UK Universities more expensive than industry – cheaper to go outside UK

## Intellectual Property Rights

- Always difficult - Lambert helps

## Companies

- Identify the ability to:
  - leverage research funding
  - access bright “new brains” for recruitment
  - access new ideas from a multi-discipline environment
  - enhance image

## Academics

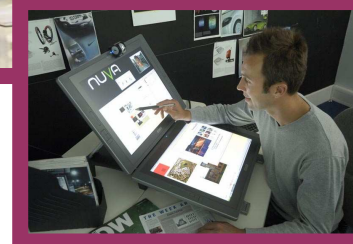
- See opportunities to:
  - tackle interesting new problems identified by companies
  - take low TRL work forward
  - enhance career and hence image

Businesses that work with academia generally achieve double the business performance of those companies that don't

# Thales Innovation and Technological Activity



- R&D at Thales totals €2.4bn (19% of revenues)
- 25,000 researchers on cutting-edge technologies
- 300 inventions per year
- Over 15,000 patents
- Thales Research & Technology (TRT) is a bridge between the academic world and the Thales Divisions.
- Over 30 cooperation agreements with universities and public research laboratories in Europe, the United States and Asia



Copyright © Nobel Web AB 2007  
Photo: Hans Mehlin

April 2009



**Thank you for your attention**