

TRL (Technology Readiness Levels)



1. TRL 1 – Principios básicos estudiados
2. TRL 2 – Concepto tecnológico formulado
3. TRL 3 – Prueba de concepto experimental
4. TRL 4 – Tecnología validada en laboratorio
5. TRL 5 – Tecnología validada en un entorno relevante (entorno relevante industrial en el caso de las tecnologías facilitadoras clave – KET-)
6. TRL 6 – Tecnología demostrada en un entorno relevante (entorno relevante industrial en el caso de las tecnologías facilitadoras clave – KET-)
7. TRL 7 – Demostración de prototipo en entorno operacional
8. TRL 8 – Sistema completo y cualificado
9. TRL 9 – Sistema real probado en un entorno operacional (fabricación competitiva en el caso de las tecnologías facilitadoras clave -KET- o en el de espacio)

TRL 1 BASIC RESEARCH	TRL 2 TECHNOLOGY FORMULATION	TRL3 APPLIED RESEARCH	TRL4 SMALL SCALE PROTOTYPE	TRL5 LARGE SCALE PROTOTYPE	TRL6 PROTOTYPE SYSTEM	TRL7 DEMONSTRATION SYSTEM	TRL8 FIRST OF A KIND COMMERCIAL SYSTEM	TRL9 FULL COMMERCIAL APPLICATION
Principles postulated and observed but no experimental proof available	Concept and application have been formulated	First laboratory test complete; proof of concept	Built in a laboratory environment ("ugly" prototype)	Tested in intended environment	Tested in intended environment close to expected performance	Operating in operational environment at pre-commercial scale	Manufacturing issues solved	Technology available for consumers
BASIC RESEARCH		APPLIED RESEARCH		TECHNOLOGY DEVELOPMENT		PROTOTYPE AND SYSTEM DEVELOPMENT		
HARDWARE AND SYSTEM TECHNOLOGIES								
DEFINE BASIC PROPERTIES	ANALYTICAL STUDY	PROOF OF CONCEPT	PRE PROTOTYPE	PRE PROTOTYPE TESTED IN LAB	PRE PROTOTYPE TESTED IN RELEVANT ENVIRONMENT	APPROVED PROTOTYPE	PRE-SERIAL MANUFACTURING	PRODUCT ON MARKET
PHARMACEUTICAL								
FINDING REVIEW	RESEARCH IDEA	DESIGN PROOF OF CONCEPT	PRODUCED DEMONSTRATE...	PILOT DRUG PRODUCED	PHASE 1 CLINICAL TRIALS	PHASE 2 CLINICAL TRIALS	NEW DRUG REGISTRATION	DRUG DISTRIBUTED AND MARKETING



