

#innovacion
#ayudascdti
#asesoramiento
#internacionalizacion



Innovation procurement

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CDTI: who we are



CDTI-E.P.E. is a Business Public Entity under the **Ministry of Science, Innovation and Universities** that promotes **innovation and technological development** of Spanish companies.



Innovation Procurement at CDTI: What do we do?



The aim is to **boost innovation** from the demand side (public sector). **CDTI Innovation** plays a crucial role as enhancer accelerating Business R&D to close the technological gap of those solutions whose technology is not yet near-to-the-market but could be achieved by financing R&D activities

PROS



- **Public Entities: modernization**

Public entities acquire first hand innovative products or services that meet their needs (early adopters) to face overcoming challenges that are not reachable in the market

- **Companies**

Provides a real testing environment for technology validation that would serve to obtain a first customer reference and gain international leadership in new markets.

Pre-Commercial Procurement (PCP)

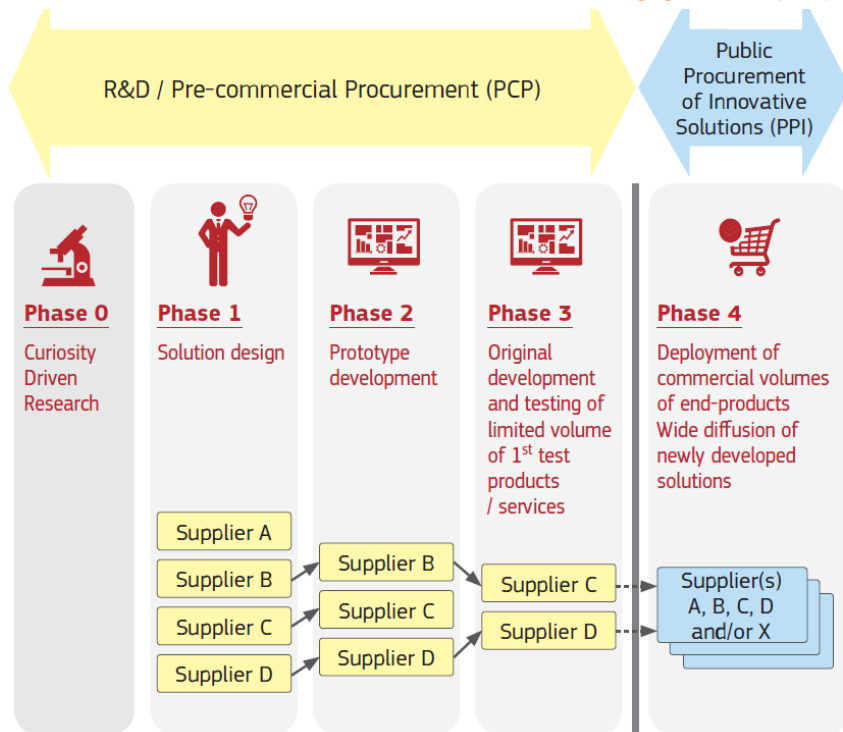
- R&D services' purchase for pre-operational prototype development (>50% of the contract)
- Buyers do not reserve IPR for themselves). Risks and benefits shared with developer.
- **No under Spanish Public Procurement (LCSP (art. 8)),** but maintains its main principles: publicity, concurrency, equality, confidentiality, transparency and no discrimination principles
- TRL: 4-7 (validation in laboratory-precommercial validation)

TRL: Technology Readiness Levels referring technology maturity level

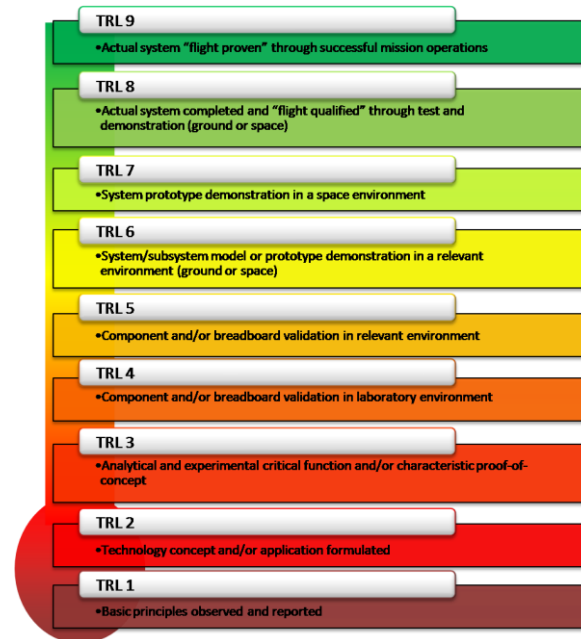
Public Procurement of Innovative Solutions (PPI)

- Procurement of innovative solutions that are nearly or already in small quantity on the market and don't need new research and development (R&D).
- Implies new or improved technology development
- **Under Public Procurement Law**
- TRL: 7-8 (close to market, more mature technology)

Innovation Procurement Types (II)



Innovation Procurement. The Power of the Public purse. EU Funded projects in the ICT domain. Ec 20221

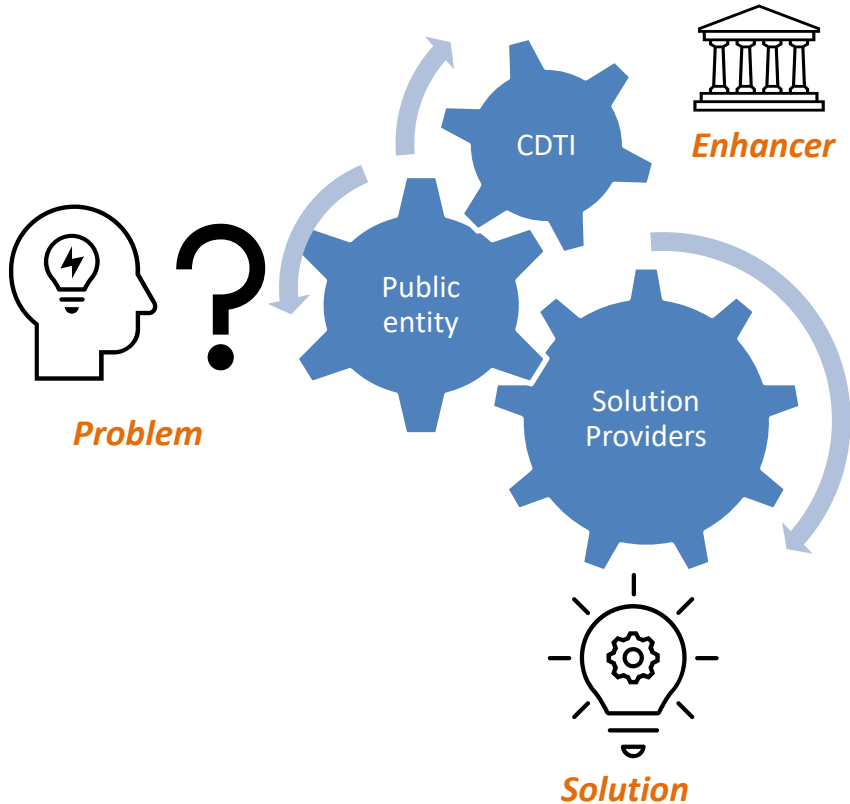


TRL: technology readiness level. NASA

TRL: 4-7

TRL: 7-8

PCP GOVERNANCE in CDTI

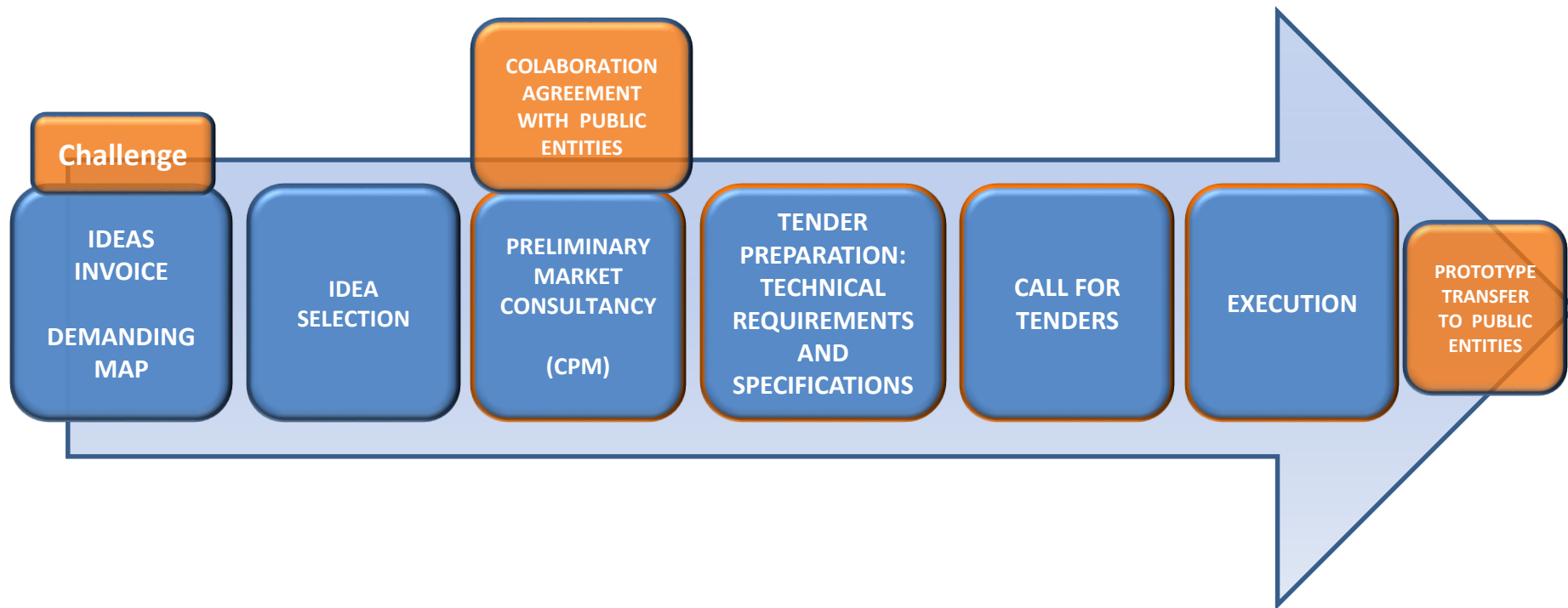


- El CDTI acts as **R&D services tender (buyer)** for technological validator/prototype development.
- Market non-existing technology development (TRL 4-5 a 6-7).
- Technology demanded by the rest of Public Entities, who act as validators in real environment.
- Developed prototypes are transferred to validator Public Entities without any cost.

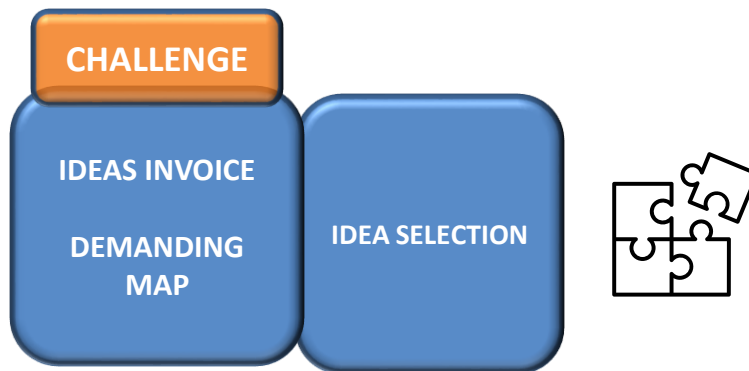
PCP Process



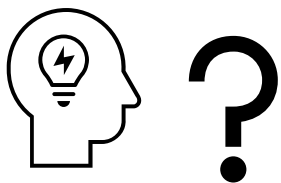
PCP PROCESS IN CDTI



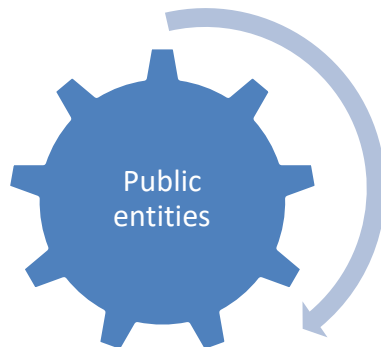
PCP PROCESS IN CDTI



- COMPROMISE of DEMANDING INSTITUTIONS
- IMPACT
- SCOPE
- TECHNOLOGIC NOVELTY
- AVAILABLE FUNDS
- PROTOTYPE LOCALIZATION (REGION)



Problem

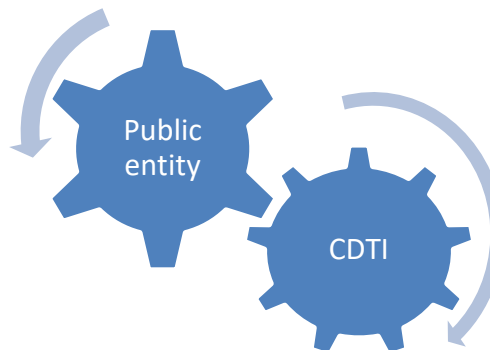
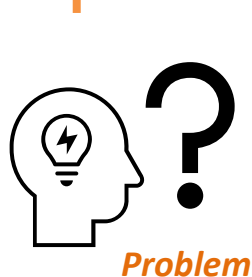


PCP PROCESS IN CDTI

COLLABORATION AGREEMENT WITH PUBLIC ENTITIES

PRELIMINARY MARKET CONSULTANCY (CPM)

- Provided in art. 115 of the LCSP
- Non-binding participation
- State of the art- technology surveill
- Demonstrate industry interest
- Identify strengths, weaknesses, and partnership needs
- Functionalities, requirements and characteristic orientation towards potential solution needs
- Public Results Report



PCP PROCESS IN CDTI

CALL FOR
TENDERS

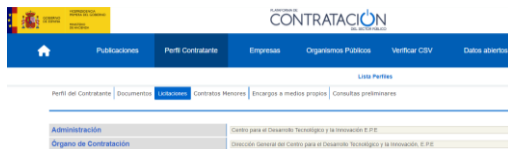
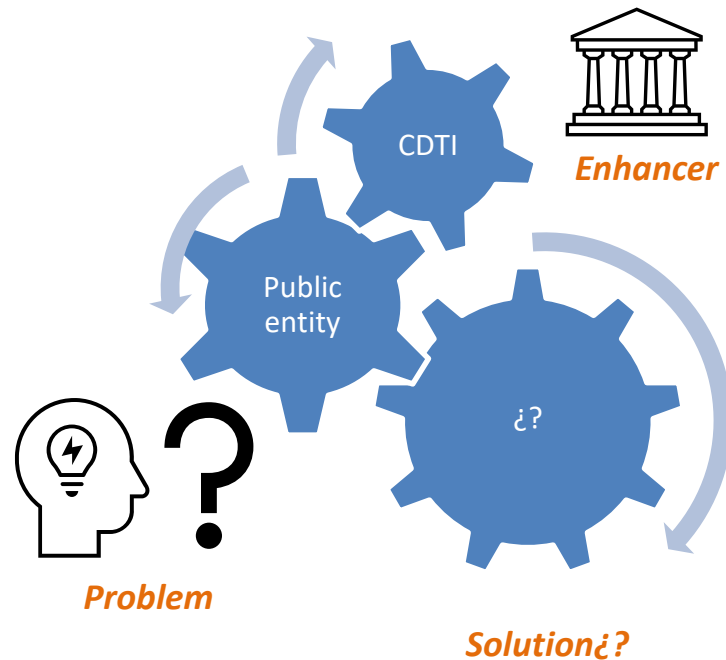
ADMINISTRATIVE CLAUSES

- Subject, Funds, Maximun tender Budget, Execution period TECHNICAL SOLVENCY ECONOMIC SOLVENCY GUARANTEE, IPR
- AWARD CRITERIA
 - 80% non assessable by formulas (technical report)
 - 20% assesable by formulas
 - Economic offer
 - Economic returns for CDTI

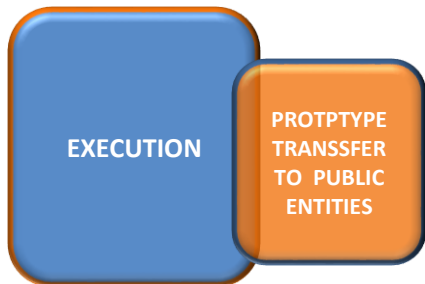
TECHNICAL REQUIREMENTS

Technical functionalities, characteristics, requirements...

SPECIAL CONDITIONS: (DNSH, OTHERS)



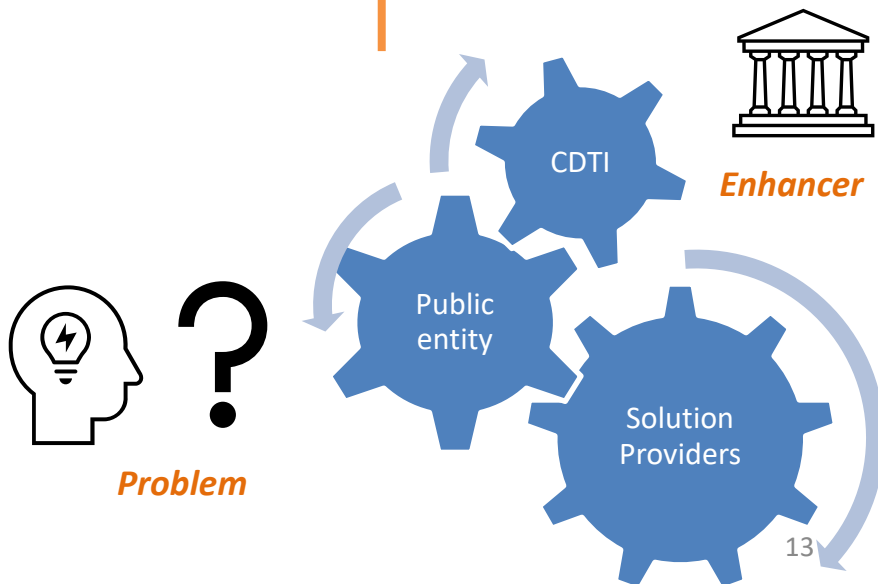
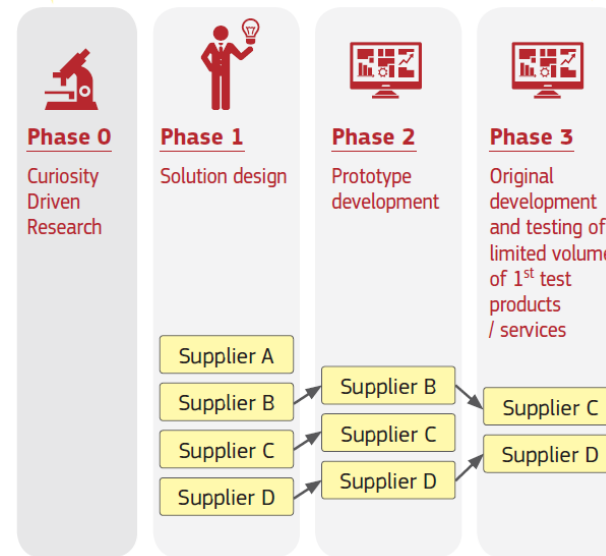
PCP PROCESS IN CDTI



EXECUTION

- PHASE I: SOLUTION DESIGN
- PHASE II: PROTOTYPE DEVELOPMENT
- PHASE III: PREOPERATIONAL VALIDATION

*Several suppliers/solution providers



PCP GOOD PRACTICES IN CDTI



FINISHED PCPS

FEDER 2014-2020 53,4 M€



SUPERFICIAL WATER QUALITY



ORGAN PRESERVATION



BRIDGE, DEVIATION POINTS AND VIADUCT CONTROL

CHS

INFORMATIC SYSTEMS FOR WATER MANAGEMENT

SIMULATION ENVIRONMENT U-SPACE



ICTP HIDROGEN TECHNOLOGIES

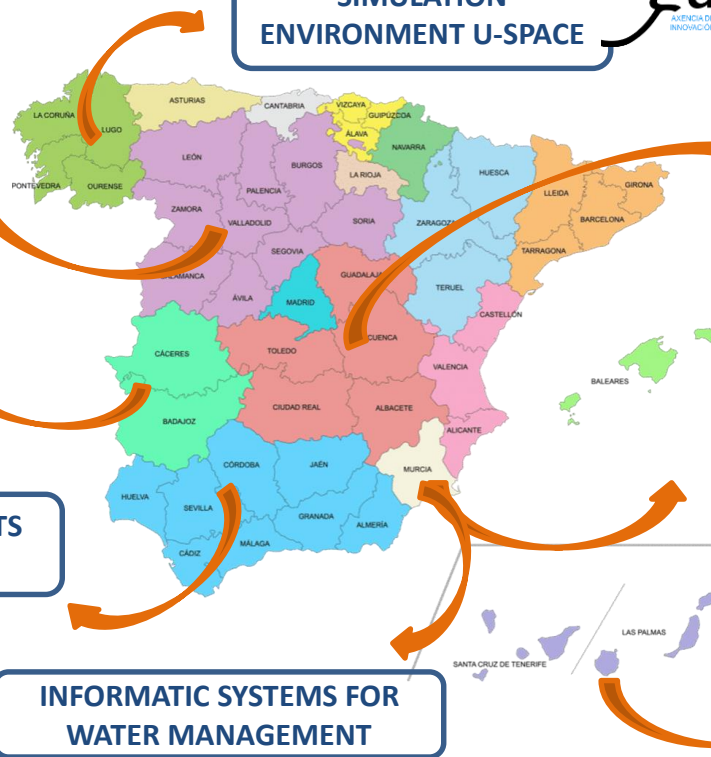
SECURITY IN RURAL ENVIRONMENT



SMART CAMPUS



OCEAN WATER DESALINATION



PCPS IN PROGRESS IN CDTI

MRR, FEDER 2021-2027 y CDTI cofinancing



INNOVATRIAL

HOSPITALS-GH2



NEUROMODULATION

HADRONTHERAPY



PET BRAIN

FIRE*



TRANSPORT FOR PRISONERS

EARTH OBSRVATION:
SATELITE, VIGILANCE AND MARITIME RESCUING



BIORREACTOR
PLATFOMR

QKD

SATELITE LAUNCHING



COMING PCPS IN CDTI

MRR, FEDER 2021-2027 y CDTI cofinancing

<https://www.cdti.es/cpi-iniciativas>

DONES



SEPI-IA



AUTOPILOT



INFRARED SENSOR



FORENSE

COMPRA PÚBLICA DE **INNOVACIÓN**

La Compra Pública de Innovación (CPI) es una herramienta para **fomentar la innovación desde el sector público**, a través de la adquisición de **soluciones innovadoras** o de **primeros prototipos** que puedan ser validados por Entidades del Sector Público español

¿Qué es la CPI?

Iniciativas CPI

¡Participa!

HADRONTHERAPY CHALLENGE



TECHNICAL CLAUSES

State of art

Cáncer is one of the biggest challenge of our actual society. **New therapies** such as **protontherapy** have emerged. Among them, **new cáncer therapy through ions**. **Hadron therapy** would offer a considerable **dosimetric optimitation** and a **higher radiobiologic efficacy**.

Needs detected

1. **Equipment simplification: a more compact linear Accelerator** for hospital space restrictions and more economical.
2. Increase radiation efficacy in each sesión, reducing number of sesiones for each patient.
3. Increase precisión in each radiation sesión, avoiding second effects to adyacent tissues and matrices.

Challenges

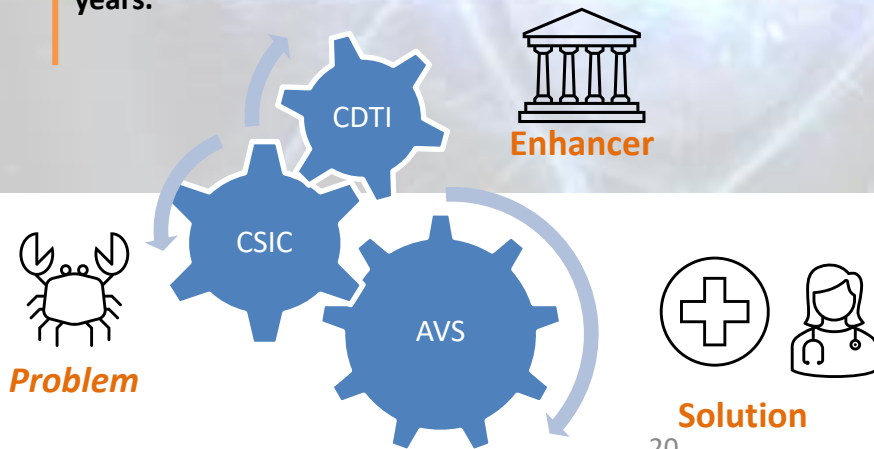
Desing, development and integration of a compact ion C^{6+} inyector of at least 10MeV/nucleon energy based in a linear Accelerator for radiobiological studies for hadronic treatment.

General Specifications

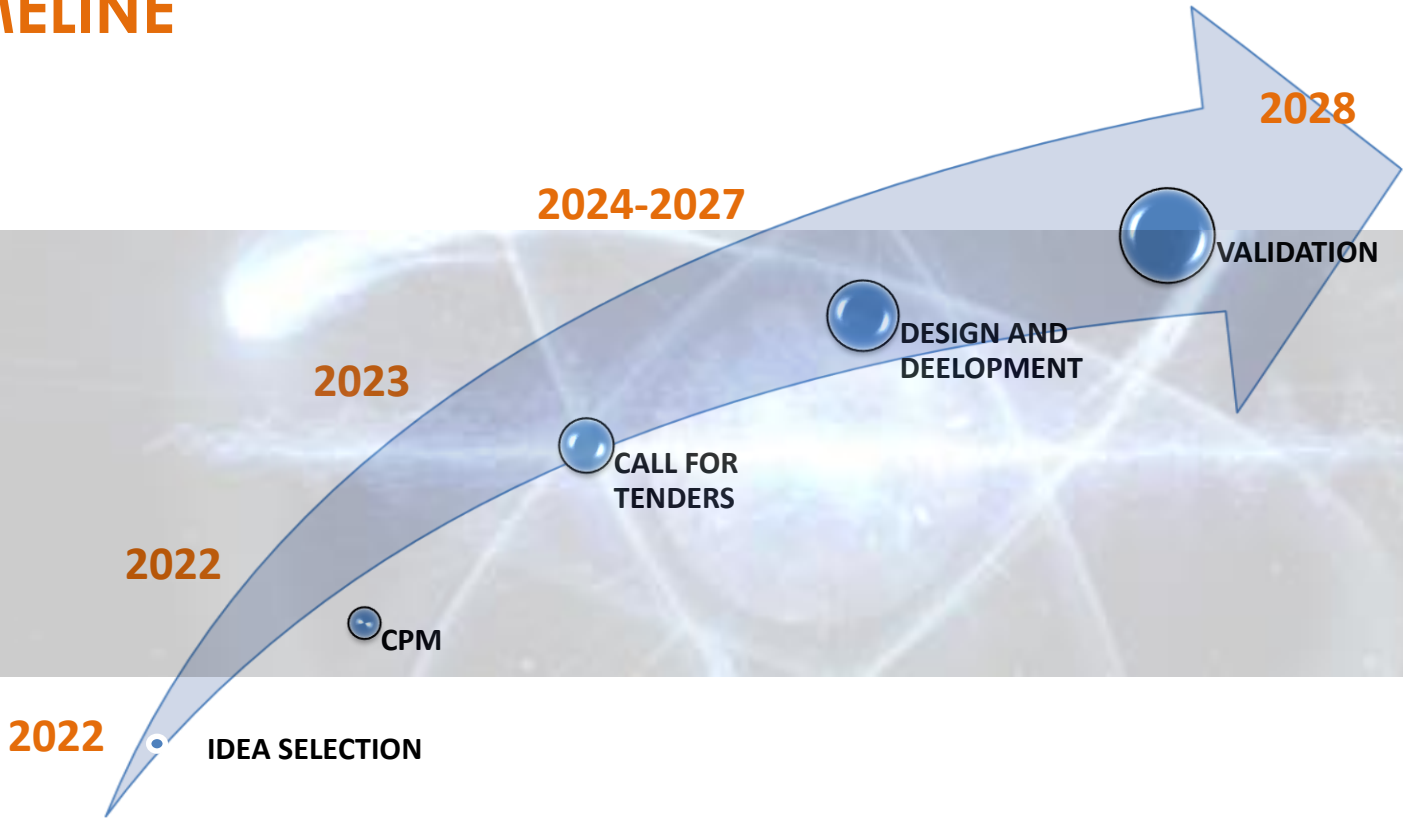
Type of equipment	Compact LINAC
Ion	Carbon (C^{6+})
Repetition	200-500 Hz
Pulse length	~5 micro-seg.
Final energy	≥ 10 MeV/nucleón
Corriente pico del haz	≥ 10 micro-A
Maximum length	~30 m

Características generales de la contratación (I)

Funds	FEDER 2021-27 and CDTI Innovation.
Object	R&D services for a compact linear Accelerator for Hadrontherapy use.
Execution period	55 months
Public Entity	Consejo Superior de Investigaciones Científicas (CSIC)
Preoperational validation	CSIC Valencia (Spain)
Technological demonstrator	Once Phase III has finished, the prototype will remain as a technological demonstrator at CSIC at least 5 years.



TIMELINE



+info sobre programas y ayudas CDTI para proyectos de I+D empresarial e innovación



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