


 **TURKEY<sup>in</sup> HORIZON 2020**  
COOPERATION AND INNOVATION CAPACITIES

*TURKEY IN HORIZON 2020*  
**ALTUN/HORIZ/TR2012/0740.14-2/SER/005**

  
This project is co-financed by the European Union and the Republic of Turkey  
Bu proje Avrupa Birliği ve Türkiye Cumhuriyeti tarafından finanse edilmektedir

# HORIZON 2020 Overview

Thies Wittig

 **TURKEY<sup>in</sup> HORIZON 2020**  
COOPERATION AND INNOVATION CAPACITIES

THE FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

# HORIZON 2020

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## What is HORIZON 2020

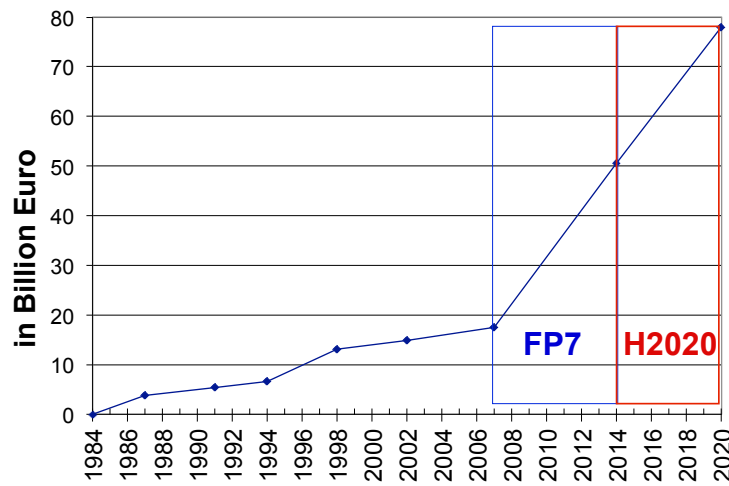
Horizon 2020 is the biggest EU Research and Innovation programme ever with nearly €80 billion of funding available over 7 years (2014 to 2020).

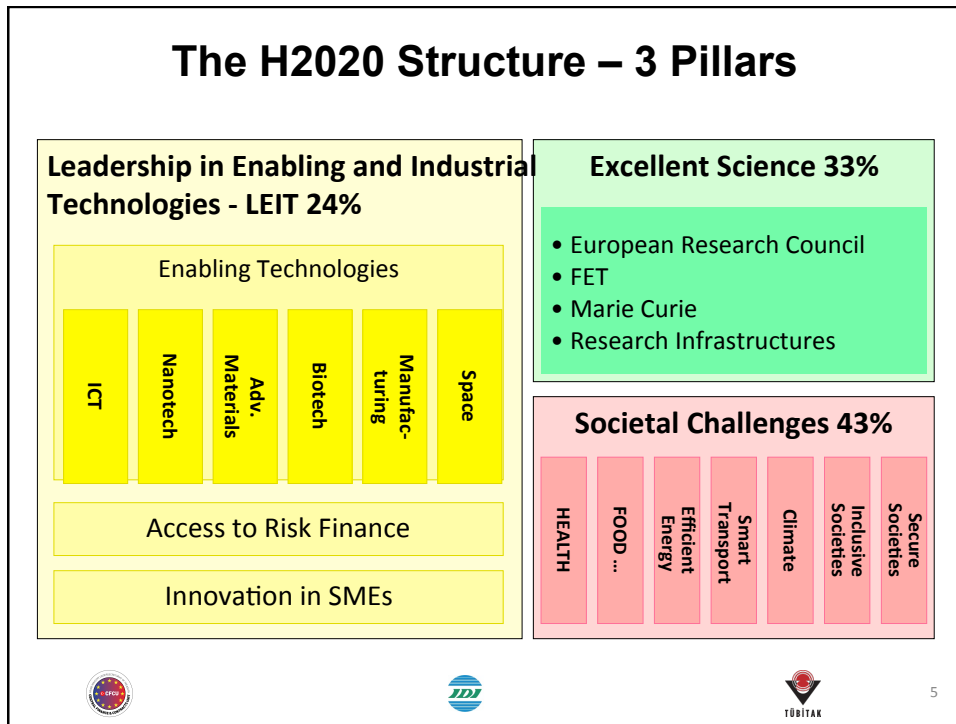


It promises more breakthroughs, discoveries and world-firsts by taking great ideas from the lab to the market.



## FP Budget Development





## Horizon 2020 - Excellent Science

**European Research Council:**

- Frontier research
- Cross disciplinary proposals and pioneering ideas in new and emerging fields, which introduce unconventional and innovative approaches
- Across all fields of research
  
- Starting Grants
- Consolidator Grants
- Advanced Grants

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## Horizon 2020 - Excellent Science

### Future and Emerging Technologies:

- Frontier research: alternative ideas, concepts or paradigms of *highly risky, non-conventional* but *life-changing* and *long-term* research

Funding schemes:

- FET Open: fostering novel ideas
- FET Pro-Active: nurturing emerging themes and communities
- FET Flagships: tackling grand interdisciplinary science and technology challenges



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## Horizon 2020 - Excellent Science

### Marie Skłodowska-Curie Actions (MSCA)

- MSCA contribute to developing new knowledge and enhancing the skills of people behind research and innovation.
- MSCA ensure excellent and innovative research training as well as attractive career and knowledge-exchange opportunities through cross-border and cross-sector mobility of researchers.
- MSCA support researchers to establish themselves on a more stable career path and to ensure that they can achieve an appropriate work/life balance.

Mobility is a key requirement in the MSCA. Researchers receive funding on the condition that they move from one country to another to broaden or deepen their competences.



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## Horizon 2020 - Excellent Science

### Research Infrastructures (RI):

3 main objectives:

- Developing the European research infrastructure for 2020 and beyond
- Fostering the innovation potential of research infrastructure and their human capital
- Reinforcing European research infrastructure policy and international co-operation



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## Horizon 2020 - Industrial Leadership

### 1. LEADERSHIP IN ENABLING AND INDUSTRIAL TECHNOLOGIES – LEIT

- Information and Communication Technologies (ICT)
- Nanotechnologies
- Advanced materials
- Biotechnology
- Advanced Manufacturing & Processing
- Space

### 2. ACCESS TO RISK FINANCE

### 3. INNOVATION IN SMES



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## Horizon 2020 - Societal Challenges

1. Health, Demographic Change and Wellbeing
2. Food security, sustainable agriculture and forestry, marine and maritime and inland water research, and the Bio-economy
3. Secure, Clean and Efficient Energy
4. Smart, Green and Integrated Transport
5. Climate action, environment, resource efficiency and raw materials
6. Europe in a changing world - inclusive, innovative and reflective societies
7. Secure societies - protecting freedom and security of Europe and its citizens.



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## Major changes compared to FP7 ?

So the first conclusion is that everything is there again in H2020 !

Naturally, topic areas change as well as the overall focus.





So everything seems to be pretty similar to FP7, **but ...**



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FP7 was called the  
Framework Programme for Research and  
Development





H2020 is called the  
Framework Programme for Research and  
**Innovation**



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## What is Innovation ?

- Innovation is the process and outcome of creating something new, which is also of value.
- Innovation involves the whole process from opportunity identification, research or invention to development, prototyping, production marketing and sales.



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## What is Innovation ?

- Innovation = Invention (research) + exploitation
- A new way of doing things, which is commercialized. Traditionally the focus has been on new products or processes, but recently new **business models** come into focus.
- Adoption of ideas that are new to the adopting organization.



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## The Innovation Chain

Research & development

Covered by H2020

Prototyping,  
'plans' for new  
products

Market  
development

Market  
replication



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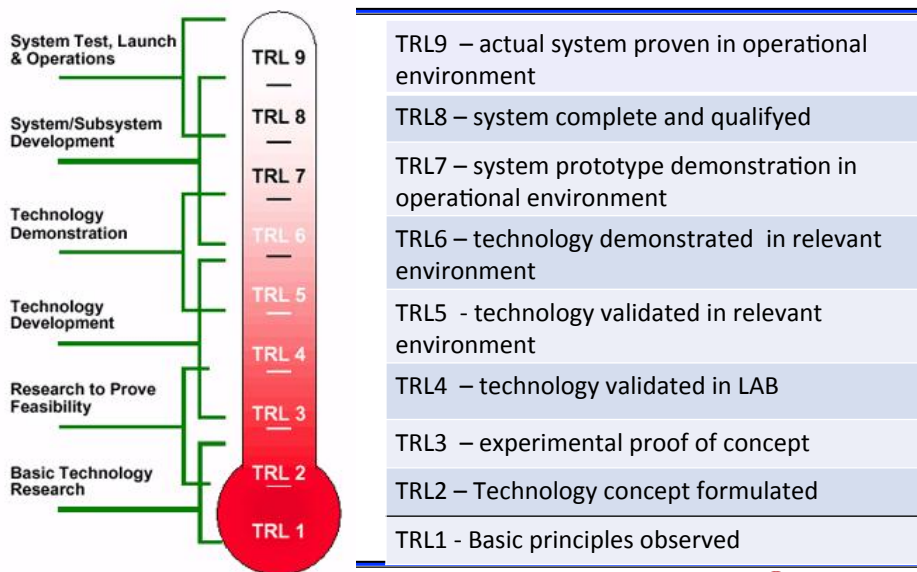
## Measuring Technology Matureness ?

### Technology Readiness Levels (TRLs)

- The use of TRLs as a measurement of the maturity level of particular technologies is new in Horizon 2020.
- Many of the call topics have a defined TRL at which the implementation of the proposal is intended to start and end. For example a project has to start at TRL 1-3 and end at TRL 4-5.



### A measurement of the maturity level of technologies: a new development in H2020



## Innovation and the Private Sector

To ensure that innovation is happening in H2020



**SME participation become obligatory in most projects. Around 20% of the total budget for Societal Challenges and LEITs must go to SMEs.**

This is good news for SMEs, of course !

It is also an important message for universities: purely academic consortia are out !



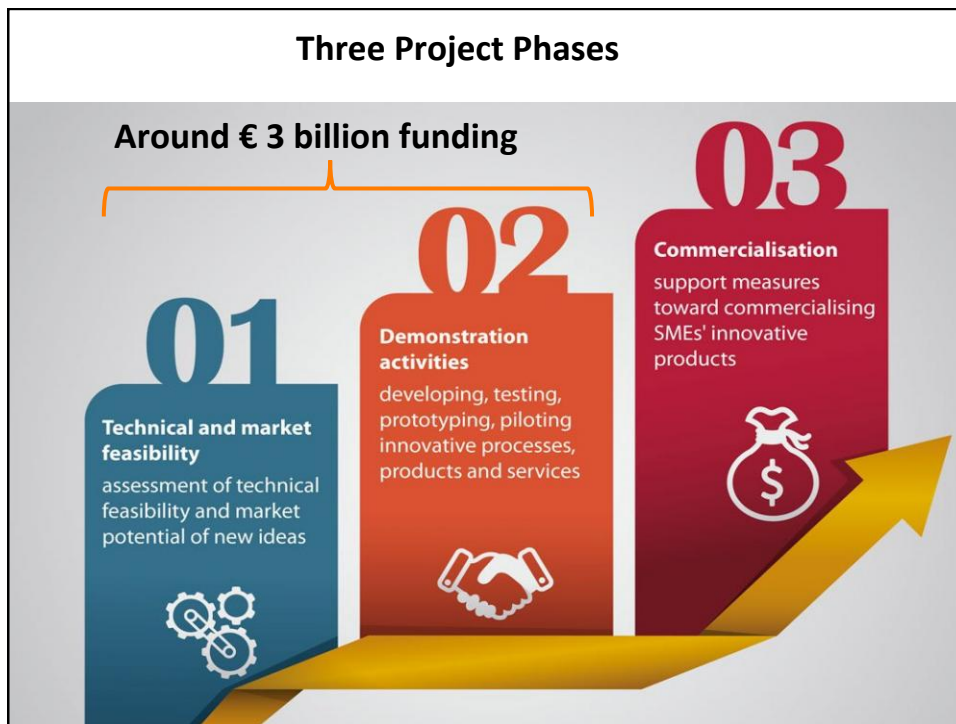
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## Opportunities for SMEs


A specific SME instrument comes under the H2020 objective of 'smart, sustainable and inclusive growth', however with a small budget!




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## The SME Instrument








### Phase 1

#### Concept & Feasibility Assessment

- €50 000 lump sum for feasibility study
- Initial 10 page business proposal to be drafted
- 6 months in duration
- High competition (around 6% success rate)

## The SME Instrument

### Phase 2 Innovation Project



- Between €0.5 million and €2.5 million in EU funding (70%)
- Develop project through innovation strategy
- Draft a more developed, 30 page business plan
- 1-2 years in duration



## The SME Instrument

### Phase 3 – Commercialisation



- No direct funding
- Extensive support and coaching
- Facilitate access to risk finance
- Additional support and networking opportunities (EEN)



## The SME Instrument

### Business coaching



Coaches will drive the performance of the organisation

Coaches suggested by EEN, and selected by the SME

Voluntary business coaching:

- o Phase 1: 3 days
- o Phase 2: 12 days



## Example: Project "TAG" H2020-SMEINST-2-2015

Coordinator: LOJKA BILGI TEKNOLOJILERI VE SERVISLERI TICARET AS

**Crowd-Sourcing technology to change how people and cars move in cities (from 1/10/15 to 31/3/17)**



"TAG is revolutionizing carpooling for Smart Cities. We are following the disruptive market success of the likes of Airbnb regarding room bookings and Waze in terms of navigation, reaching valuations of tens of billions of Euros. However, well-documented technological problems and bad user experiences have prevented such success in carpooling.



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## Example: Project "TAG" H2020-SMEINST-2-2015

TAG is now changing this path using proprietary algorithms and smart phone technology. To our knowledge, no other technology in the world is able to offer our solutions.



In Istanbul, our prototypes have been successful and have attracted angel funding of €1.3 million from international and local investors ( as it has a strong revenue model) as well as government grants of €0.4 million.

...

1,745,362 Euro funding



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THE FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

HORIZON 2020

The practical side



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## How easy will it be to get H2020 funding ?

The competition is even higher as in FP7, with an average success rate going down to 12%.

But also, as before, excellent proposals that are fully in line with the objectives of a call stand a realistic chance to win.

Procedures have been simplified and processes are a bit faster.



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## Types of actions supported by grants

- **Research and Innovation Actions**
- **Innovation Actions**
- **Coordination and Support Actions**
- **SME instrument**
- ERANET Co-fund
- Pre-commercial procurement Co-fund
- Public procurement of innovative solutions Co-fund



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## Research and innovation actions

- Actions primarily consisting of activities aiming to establish new knowledge and/or to explore the feasibility of a new or improved technology, product, process, service or solution.
- For this purpose they may include basic and applied research, technology development and integration, testing and validation on a small-scale prototype in a laboratory or simulated environment.



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## Innovation actions

- Actions primarily consisting of activities directly aiming at producing plans and arrangements or designs for new, altered or improved products, processes or services. Often specific TRL levels are required as a starting point.
- For this purpose they may include prototyping, testing, demonstrating, piloting, large-scale product validation and market replication.



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## Coordination and support actions

Actions consisting primarily of **accompanying measures** such as standardisation, dissemination, awareness-raising and communication, networking, coordination or support services, policy dialogues and mutual learning exercises and studies, including design studies for new infrastructure and may also include complementary activities of networking and coordination between programmes in different countries.



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## Current Work Programmes

### Where to find them:

[http://ec.europa.eu/research/participants/portal/desktop/en/funding/reference\\_docs.html](http://ec.europa.eu/research/participants/portal/desktop/en/funding/reference_docs.html)






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■ ERC rules for submission and evaluation

Work Programmes

- 2014-15
- 2016-17
  - Main WP
    1. Introduction 2016-17 >
    2. Future and Emerging Technologies (FETs) 2016-17 >
    3. Marie Skłodowska-Curie actions (MSCA) 2016-17 >
    4. Research infrastructures (including e-Infrastructures) 2016-17 >
    5. Introduction to Leadership in enabling and industrial technologies (LEITs) 2016-17 >
    - 5i. Information and communication technologies (ICT) 2016-17 >
    - 5ii. Nanotechnologies, advanced materials, advanced manufacturing and processing, biotechnology 2016-17 >
    - 5iii. Space 2016-17 >
    6. Access to risk finance 2016-17 >
    7. Innovation in SMEs 2016-17 >
    8. Health, demographic change and wellbeing 2016-17 >
    9. Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy 2016-17 >
    10. Secure, clean and efficient energy 2016-17 >
    11. Smart, green and integrated transport 2016-17 >
    12. Climate action, environment, resource efficiency and raw materials 2016-17 >
    13. Europe in a changing world - inclusive, innovative and reflective societies 2016-17 >
    14. Secure societies - protecting freedom and security of Europe and its citizens 2016-17 >
    15. Spreading excellence and widening participation 2016-17 >
    16. Science with and for society 2016-17 >
    17. Cross-cutting activities (Focus Areas) 2016-17 (NEW) >
    18. Fast Track to Innovation Pilot 2016-17 >
    19. Dissemination, Exploitation and Evaluation 2016-17 >
  - General Annexes to the Main WP

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## Rules of Participation




### Minimum conditions

- For standard collaborative actions
  - At least, 3 legal entities, each established in different MS/AC
- For SME Instrument, programme co-fund, CSA
  - 1 legal entity established in a MS/AC

### Additional conditions

- To be set out in the Work Programme (i.e. number of participants, type of participants, etc.)



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## Evaluation of proposals

### Award criteria

- Excellence
- Impact
  - *Higher weighting for innovation actions*
- Quality and efficiency in the implementation
- Details, weightings and thresholds be laid down in WP
- Evaluation carried out by independent experts
- Possibility of a 2 stage submission procedure



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## Simplified Funding Model

### One reimbursement rate by action

The same rate for all beneficiaries and all activities:

- Up to 100% for Research and Innovation actions
- Up to 70% for innovation (non-profit entities up to 100%)
- Up to 70% for PCP co-fund, 33% for ERANET co-fund, 20% for PPI co-fund



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## Simplified Funding Model

### A single method for calculation of indirect costs:

- Flat rate of 25% of total direct costs, excluding subcontracting, costs of third parties and financial support to third parties



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## Eligible costs

### Main cost categories:

- Personnel costs
- Costs of subcontracting
- Other direct costs
  - Travel costs and subsistence allowances
  - Depreciation costs of equipment
  - Costs of other goods and services (including non-deductible VAT) **NEW**







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So far, so good.

These are the facts that you can convey to your audience.

But there is also some advice that is more basic but not less important...



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**Collaborative Research:  
What is in for me ?**



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## Why to try to get in and why not

It is important to be clear about that

- It is not easy to get an H2020 project
- The competition will remain high (15% success rate)
- It requires a substantial amount of work
- You need to team up with a European consortium



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## Why to try to get in and why not

Do you have the right motivation to try and get in ?

- Is it for widening your research perspectives or those of your department/institute ?
- Do you have the backing of the management/ dean of your organization ?
- Are you prepared to accept dependencies on other partners in the research work to be done ?
- Are you aware of the administrative, management and reporting overheads ?
- ~~Is the money the main reason ?~~



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## Why to try to get in and why not

Some conditions you should be aware of:

- Do you have a good **research track record** to convince potential partners (academia)?
- Do you have an **up-to-date development or production environment** (SME)
- Does a **research team** exist at your university, or are you an individual researcher ?
- Does your institute/company have a **medium to long-term research/development perspectives?**



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## Remember ...

- The ultimate aim is to convince the evaluators that your proposal is the best !

But before you come to that step

- You have to win your place in a consortium !

Take the answers of the previous questions and create a convincing profile of yourself and your organisation/research group



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## Some final words

My previous comments may sound rather restrictive, but my advice is:

### **Try everything to get into collaborative projects**

- It will boost your scientific experience
- The cross-cultural experience is invaluable
- ... and last but not least: **it is real fun !**



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Thank you !



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