



# **Project Writing Camp for SMEs**

Istanbul, 24th January 2020

http://www.turkeyinh2020.eu











# Turkey in Horizon 2020 Phase II

Çağrı Yıldırım – TÜBİTAK

http://www.turkeyinh2020.eu











Technical Assistance for Turkey in Horizon 2020 Phase-II EuropeAid/139098/IH/SER/TR

# Dr. Aleksander Bakowski

Team Leader, Turkey in Horizon 2020 Phase II Project











Technical Assistance for Turkey in Horizon 2020 Phase-II
EuropeAid/139098/IH/SER/TR

# Turkey in Horizon2020: Phase II Support to Turkish participation in the EU Framework Programmes for Research and Innovation

Aleksander Bakowski, Team Leader Istanbul, 24th January 2020







## Turkey in Horizon 2020 Phase II Key Project Objectives

- Provide support to Turkish participation in Horizon2020
- Strengthen capacity of Turkey in Science, Technology and Innovation
- Facilitate integration of the Turkish Research Area to the European Research Area through increasing participation in Horizon2020
- Variety of activities; Knowledge Diffusion; Raising Awareness;
   Networking; Training events; Publications; Online Tools; etc.

Commenced 07.01.2019; closes: 07.01.2022

Web site: <a href="http://www.turkeyinh2020.eu/">http://www.turkeyinh2020.eu/</a>

# Turkey in Horizon2020

**Return Amount: €167,9m.** 



768 Turkish participants (0.64%)

EU = €167.9m. (0.36%)



130 SMEs in funded projects
EU = €29m.
43 in SME Instrument
EU = 9,5 m.

145 Coordinators EU = €48 m.



558 projects with Turkish participation (2.2%)

17.3%



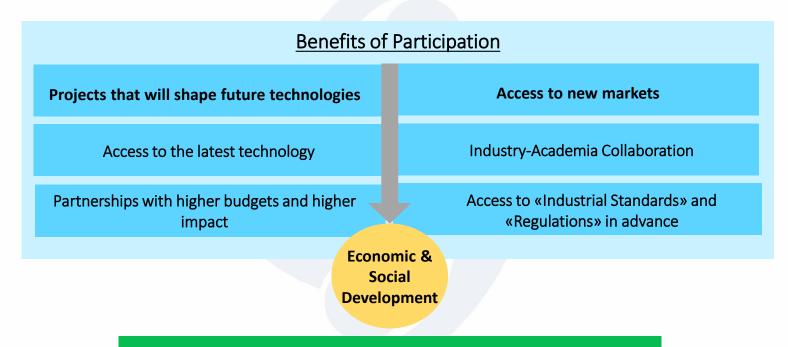
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SME

LE

# Why to participate in Horizon2020?



**Cooperation that complement the impact of national investments** 







# Our project is here to help...



### **Training Events**

- Information Multipliers
- Introductory
- Focus Groups
- IPR
- Access to Risk Finance
- Lobbying
- Project Writing Camps



### **SME Support**

- 1-to-1 Support
- Project Writing Training
- Pitching Workshop
- Feasibility Reports
- Investment Readiness
- Webinars



### **Networking**

- Brokerage Events
- International Study Visits
- Award Ceremonies
- Conferences
- National Adisory Groups



### **Tools**

- Website
- Training
- Helpdesk
- Guides

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21.4



SME

LE

# Project Launch Event & Information Multipliers Trainings

#### Schedule:

- Launch & IMS 1: April, 2019, Ankara
- IMS 2: Sep, 2019, Istanbul
- IMS 3 & 4: 2020, Ankara & Istanbul
- IMS 5 & 6: 2021, Ankara & Istanbul

- A 2-day event dedicated to IMs.
- Familiarise IMs with advanced H2020 issues
- Proposal development & Consortium Building
- Innovation, Business Management
- Impact of H2020 proposals
- Commercialisation of H2020 results





# Training: Preparing proposals for H2020 & Horizon Europe

Events	Type of training	Year	Participants	Content
6+3	General & Introductory Trainings	2020, 2021	600+300	General information about the new programme (Horizon 2020 & Horizon Europe)
12	Focused Group Trainings	2019, 2020	360	Proposals development in specific thematic priorities, new Green Deal call
3	Project Writing Camp	2019, 2020	60	Proposal writing
3	Access to Risk Finance	2020, 2021	300	Innovation funding schemes, business Support
2	Trainings on lobbying	2020, 2021	100	Lobbying on programme and proposals level
3	IPR Trainings	2020, 2021	300	Intellectual Property for H2020

# General & Introductory Trainings for HE

### Schedule (start date June 2020):

- GIT 1 5, 2020
- GIT 6, 2021

### Description / Objectives of the Events:

- 1-Day Introductory Event
- Raising Awareness on TARAL for HE opportunities
- Intro to eligibility, rules, calls, themes etc.

#### Audience:

- Newcomers to Horizon Europe
- Inexperienced researchers



# Focus Group Trainings

#### Schedule:

- FGT1 Clean Sky, May 2019, Ankara
- FGT2 Security, May 2019, Ankara
- FGT3 Energy, May 2019, Istanbul
- FGT4 ERC, Sep 2019, Ankara
- FGT5 ICT, Oct 2019, Ankara
- FGT6 PRIMA MED, Dec 2019, Ankara
- 6 more FGT events in 2020

- A 2-day event designed for experienced Stakeholders.
- Increase participation in H2020 & HE
- Deliver Specific Knowledge on project preparation
- Training organised under specific thematic areas.
- Green Deal call event planned





# **Proposal Writing Camps**

#### Schedule:

- PWC1 TWINNING, Jul 2019, Ankara
- PWC2 ERC, Oct 2019, Ankara
- 1 more PWC event in 2020 (IF of MSCA)

- 5-Day Proposal Writing for Coordinators.
- Familiarisation with specific theme/call
- Develop proposal framework & specific context
- Targeted on specific H2020 & HE calls





## Access to Risk Finance

#### Schedule:

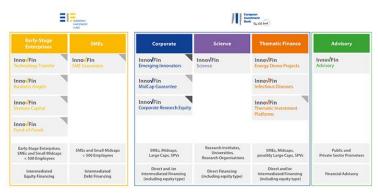
- ARF1, April 2020, Istanbul
- ARF2, Sep 2020, Istanbul
- ARF3, 2021, Istanbul

### Description / Objectives of the Events:

- 1-Day high profile event.
- Present and explain available EU Finance Instruments for innovators (InnovFIN)
- Increase awareness in SMEs and industry of new financial instruments

#### Audience:

- Financial Intermediaries, Finance Professionals (VC's, Business Angel Networks, Banks etc.)
- SMEs, startups & Entrepreneurs







Photos from Previous Turkey in H2020 Project (2016-17)

## **IPR Trainings**

#### Schedule:

- IPR1, May 2020
- IPR2, Oct 2020
- IPR3, 2021

### Description / Objectives of the Events:

- 2-Day highly specialised event for experienced researchers
- Detailed analysis of IPR issues in Horizon 2020 & Horizon Europe
- Exploitation, Commercialisation of Results

#### Audience:

Experienced Researchers, Legal professionals, IPR practitioners



# Training on Lobbying

#### Schedule:

- LOB1, June 2020
- LOB2, 2021



### Description / Objectives of the Events:

- 1-Day highly specialised event
- Help individuals increase their knowledge on EU institutions and agencies
- understand how to lobby on programme level and through European Partnerships

### Audience:

• coordinators, experienced researchers, senior officials, NCPs

# Support to SMEs



- Project Writing Training
- Project Writing Camps
- Investment Readiness Training
- Pitching Workshop
- Webinars
- One-to-One Consultancy Support
- Feasibility Report Consultancy

# Support to SMEs for Horizon 2020

No	Activity	Year	No. of participants	Content
50	1-to-1 Project Writing consultancy support	2019-21	50	Consultations to improve the quality of SME Instrument project proposals
6	Project Writing Camps	2019-21	120	Proposal preparation workshops for selected SMEs
12	Project Writing Trainings	2019-21	600	General SMEI proposal writing training
9	Webinars	2019-21	225	For newcomers to SMEI
1	Pitching Workshop	2020	30	For high growth potential start-ups who may be invited to pitch to the EC
1	Investment Readiness Training	2019	30	For SMEs who may be pitching to investors
10	Feasibility Report Consultancy	2019-21	10	SMEs which have been awarded "Seal of Excellence" from EC







# **Project Writing Training for SMEs**

#### Schedule:

- 4 events x 1 day held in 2019 (Ankara, Istanbul, Izmir & Adana)
- Target 200; 222 attended
- 4 more events in 2020 (Feb, Mar, Jun, Jul) and 4 in 2021 – targeted at 50 attendees each



- General guidance on proposal development and authoring
- Explanations and exercises on EC proposal structure
- Review of evaluation process focusing on what evaluators look for
- Shared experience with Turkish proposal developers

# **Project Writing Camps for SMEs**

#### Schedule:

- 2 events x 1 day held in 2019 (Ankara & Istanbul)
- Target 40; 67 attended
- 2 more events in 2020 (Jan, Mar) and
   2 in 2021 targeted at 20 attendees each



- Guidance on each proposal element, based on EC structure
- Review of evaluation process focusing on what evaluators look for
- Share experience with successful Turkish SMEs
- Short evaluation meetings with project experts to review proposals in preparation

# **Investment Readiness Training for SMEs**

#### Schedule:

- 1 Event over the course of the Project
- Held in Istanbul on 17<sup>th</sup> July
- Target 30; 53 attended



- Presentations/discussions with venture capitalists, bankers and other funding bodies
- Feedback from funding institutions on what makes a potential investment attractive to backers
- Guidance on how to bring out the best in the content of pitches to potential investors
- Guidance on pitching techniques to optimize their impact

# Pitching Workshop for SMEs

#### Schedule:

- 1 Event over the course of the Project
- To be held in Istanbul on 28 April 2020
- Target 30 attendees



- Presentations/discussions with EC officials involved in judging process
- Feedback from Turkish judges on what the judging panel look for in SME pitches
- Guidance on how to bring out the best in the content of pitches to EC judges
- Guidance on how to optimize the impact of pitches

### Webinars

#### Schedule:

- 3 Webinars in 2019
- 3 held so far (28/03 & 23/07 & 10/12) attracted overall audience of 260 against 75 target
- 3 more webinars in 2020 (Feb, April, Nov) and 3 in 2021



### Description / Objectives of the Webinars:

- Aimed at newcomers to H2020 and EC programmes
- Topics selected by TÜBİTAK; Web1 on 'What is SMEI?', Web2 on 'Accelerator' programme
- Format: introduction to TÜBİTAK services for SMEs, followed by main presentation then live questions 2 hours overall
- Presentations and questions/answers placed on project web site

# One-to One Consultancy Support

### **Target audience:**

- High-growth, high-tech SMEs
- With proposals that have not reached the EC pass mark
- 50 SMEs will receive 2 days of consultancy in 2020/21



### Description / Objectives:

- Undertake self-assessment exercise
- Identify issues within the businesses especially those that affect their proposals
- Provide 'Road Maps' for the SMEs to use in developing their businesses.
- Improve their proposals so that they will have a better chance of funding success

# **Feasibility Report Consultancy**

### **Target audience:**

- High-growth, high-tech SMEs
- With proposals that have received EC 'Seal of Excellence'
- 10 SMEs will receive up to 4 hours of consultancy in 2020-21



### Description / Objectives:

- Undertake self-assessment exercise
- Identify issues within the businesses especially those that affect their proposals
- Provide 'Road Maps' for the SMEs to use in developing their businesses
- In-depth improvement of proposals and presentation using external partners to look at markets, customers, technology, finance, etc.

# **Networking Activities**



- Brokerage Events
- International Study Visits
- Award Ceremonies
- Conferences
- Info Days

# Networking & Knowledge Diffusion on Horizon Europe

Event	Type of training	Year	Participants	Content
2	Brokerage events	2019	300	Collaboration opportunities, F2F meetings, Consortia building
20	International Study Visits from TARAL to EU key players	2019, 2020, 2021	200	Networking and projects partnerships
20	National Advisory Group Meetings	2019, 2020, 2021	300	Strategic approach to partnership & Horizon Europe
3	Annual Award Ceremony	2020, 2021	450	Awards for successful H2020 participants
1	Horizon Europe Launch Conference	2020	300	International launching conference on Horizon Europe
3	Info Days on Horizon Europe (HE)	2020, 2021	300	Info days to present HE

# **Brokerage Events**

### Schedule:

- ICTurkey2019, Istanbul, Jul 2019
- Cities of the Future, Brussels, Nov 2019

- Networking & Face to Face meetings
- New partnership opportunities
- New collaborations in H2020

Event	Participants	Meetings
ICTurkey2019	431	> 1000
CoF2019	298	> 700











# **International Study Visits**

#### Schedule:

- ISV1, SECURITY / CERTH / Thessaloniki, GR / Jul 2019
- ISV2, R&I Days / Brussels, BE / Sep 2019
- ISV3, SOCIAL SCIENCES / ZSI / Vienna / Dec 2019
- ISV4 12 / Jan: AI, Manufacturing, Feb: HEALTH, March: ICT, SECURITY, Apr: NMBP/ Germany, Greece, Italy, Spain, Portugal, UK, Netherlands, Serbia/ in 2020
- ISV13 20 / HORIZON EUROPE MISSIONS & THEMES / Multiple locations / in 2021

- Networking & consortium building between EU & TR researchers
- Face to Face meetings to discuss specific calls and opportunities
- Visit to successful H2020 players
- Exchange of knowledge and ideas, concept development





# National Advisory Group Meetings

#### Schedule:

- NAG1 Batteries, Apr 2019
- NAG2 Rare Diseases, Nov 2019
- NAG3 IPA Projects, Nov 2019
- NAG4 ESCEL, Feb 2020
- NAG5 TR Municipalities, Feb 2020
- NAG6 HORIZON EUROPE, May 2020
- NAG7 CANCER Mission, Jun 2020

- NAG8 11, 2020
- NAG12 20, 2021



- A "platform" to support exchanging views between Turkish stakeholders
- Invite key speakers from Europe to present the new Horizon Europe opportunities
- Establish connections between Turkish and European stakeholders
- Exchange of knowledge and ideas, concept development

### **Award Ceremonies**

### Schedule:

• AWC1,2:2020

• AWC3:2021

- Promote the success of achieved stakeholders
- Create a positive trend among Turkish R&D stakeholders
- Show to community that policy makers and responsible government bodies are aware of outstanding accomplishments
- Recognition motivates organisations and individuals to strive to do better
- Chance for celebration and reflection



## Horizon Europe Launch Conference & Info Days

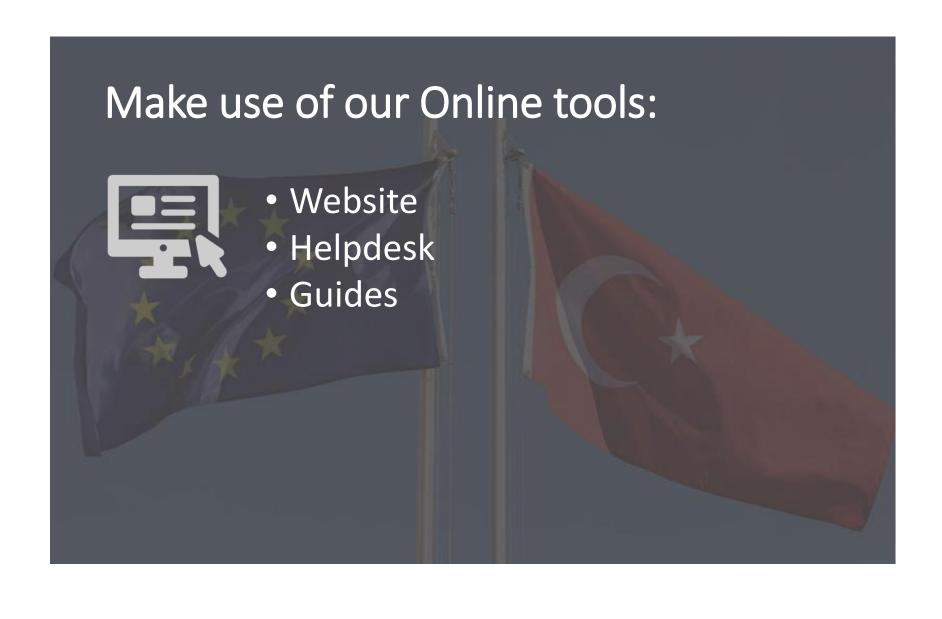
#### Schedule:

HEC: Sep-Dec 2020

INF 1 - 3: 2021

- 1 high profile conference to mark the start of Horizon Europe calls
- 3 Infodays to promote participation in
   HE, explain differences between H2020
   and HE, present calls and thematic areas





TURKEY: HORIZON 2020





#### WELCOME TO THE OFFICIAL PAGE OF "TURKEY IN **HORIZON 2020" PROJECT!**

// Download our Intellectual Property and Legal & Financial Guides for Turkish Participants! Available in English and Turkish.//We are here to support Turkish public and private organisations, industry and SMEs to maximise their benefits from Horizon 2020, the European Union programme for Research & Development. Turkey has an excellent opportunity to increase the participation of its SMEs, foster innovation and bring together researchers and entrepreneurs from Europe and Turkey. The project offers workshops & training, consultancy services, legal, financial and IPR support for Horizon 2020 proposals through a helpdesk, evaluation services plus collaboration and communication tools for networking with the Information Multipliers!



Latest News

Horizon 2020 Cities of the Future 2019

m 10 Sep 2019

http://turkeyinh2020.eu





Training & Networking Events (Phase II)

This is the section of all the training &

networking activities under the Turkey in

Horizon 2020 Phase II project (20...

Where to start with Horizon 2020

This section explains in simple words where to start and how to exploit successfully funds from the largest European ...

#### Proposal Development

In this section you can find Proposal Development guidelines, administrative manuals, statistics and anything related...

#### Legal & Financial Issues

Consortium Agreement, Grant Agreement, Budget, Costs and Legal & Financial Issues related to H2020.

#### Training Events (2016-2017)

Presentations & Training materials from the previous Turkey in H2020 Project (2016-2017). Training Events, guidance a...

#### Intellectual Property (IP) Guide

A dedicated area of our Helpdesk exclusively for Intellectual Property Rights and related issues in Horizon 2020.

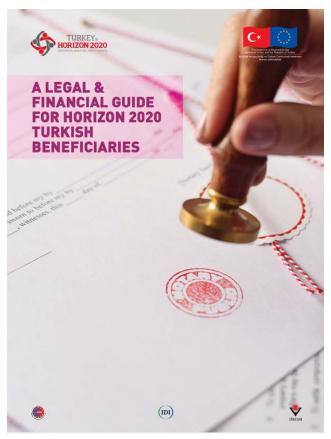
#### Promoted articles

ISV-3: SOCIAL SCIENCES International Study Visit to ZSI, Vienna

PWT-SME-4: Project Writing Training for SMEs

FGT-5: Focus Group Training on ICT

http://helpdesk.turkeyinh2020.eu



http://bit.ly/TH2020-Legal



http://bit.ly/TH2020IPR

#### Plans for the next 3 months: February

Activity	<b>Event No</b>	Location	Date planned	Thematic Area	Reference document/ comments
A2.4 VISITS TARAL	ISV5	Thessaloniki	2020, February 10-14	ICT/HEALTH	
A1.3.2 Proposal Writing Training for SMEs	PWT5	Ankara	2020, February 12	SME Accelerator	Eastern Anatolia
A1.3.2 Proposal Writing Training for SMEs	PWT6	Istanbul	2020, February 14	SME Accelerator	Western Anatolia
A2.5 Advisory Group Meetings	AGM4	Istanbul	2020, February 18	ECSEL	ECSL JU key players, ECSEL success stories, EXCEL calls, presentation of project ideas - 3 parallel sessions.  Venue Boğaziçi University.
A2.5 Advisory Group Meetings	AGM5	Ankara	2020, February 20	Municipalities	
A1.2.3 Focused Group Trainings	FGT7	Ankara	2020, February 17-18 or 20-21	Health	Workprogramme 2020
A1.2.3 Focused Group Trainings	FGT8	Ankara	2020, February 25-26	INNO SUP	Workprogramme 2020
A.1.2.4 WEBINAR	WEB4	Ankara	2020, February 28	SME Accelerator	Accelerator Financial Issues

#### Plans for the next 3 months: March

Activity	Event No	Location	Date planned	Thematic Area	Reference document/ comments
A2.4 VISITS TARAL	ISV6	Madrid	2020, March 9- 13	Security	
A.1.2.5 Access to Risk Finance	ARF1	Istanbul	2020, March (tbc)	Access to Risk Finance for SMEs	The aim of the event is to increase awareness in SMEs for new financial instruments available.
A1.3.3 Project Writing CAMP for SMEs	PWC4	Istanbul	2020, March 24	ТВА	

#### TH2020 Team of Experts



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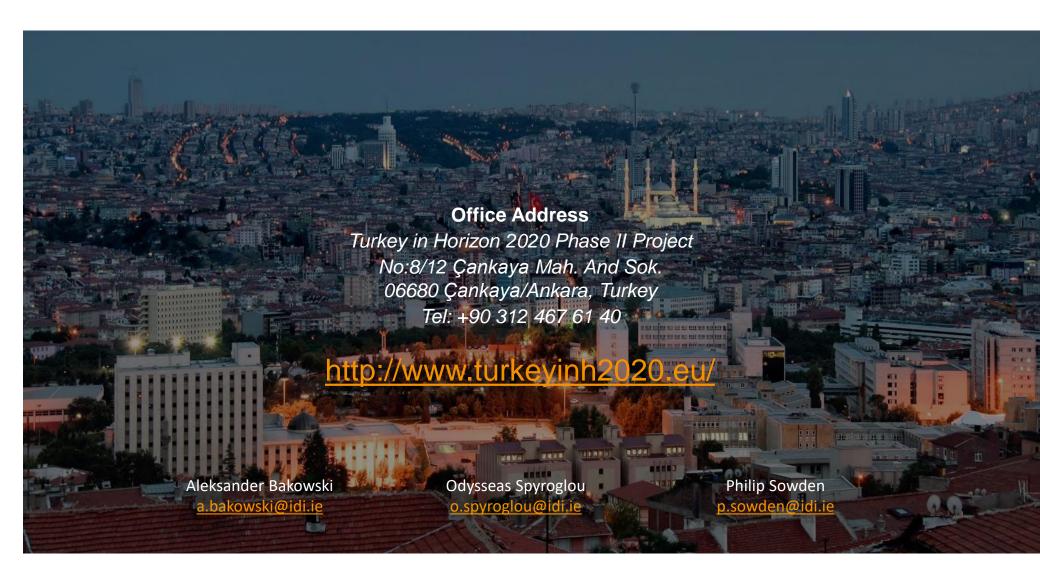
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## Turkey in Horizon 2020 Phase II

## Dr Aleksander Bakowski Team Leader

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## Turkey in Horizon 2020 Phase II

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SME Key Expert

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#### Presentation:

Horizon 2020 and the SME Instrument

Transition from SMEI to Accelerator

Experience of working with Turkish SMEs







## Horizon 2020 Framework Programme...







## H2020 is mainly aimed at SMEs...



1 to 250



**Up to €50m turnover** 







## SMEs are very important to Turkey



92% of Enterprises 78% of Employment 53% of GDP



#### Horizon 2020

## Excellent Science

Frontier research funded by European Research Council €13.095bn

Marie Skłodowska-Curie Actions €6.162bn

Future and emerging technologies €2.696 bn

> World-class infrastructure €2.488bn

#### Industrial Leadership

Leadership in enabling and industrial technologies €13.557bn

SME Innovation Instrument €3bn

Access to risk finance €2.842bn

#### Societal Challenges

Health and wellbeing €7.472 bn

Food security and sustainable use of biological resources €3.851bn

Sustainable energy €5.931bn

Green, integrated mobility €6.339bn

Climate action, environment, resource efficiency and raw materials €3.081bn

Europe in a changing world €1.309bn

> Secure societies €1.695bn

€29.7bn

#### €24.4bn

€17.0bn

Spreading excellence and widening participation

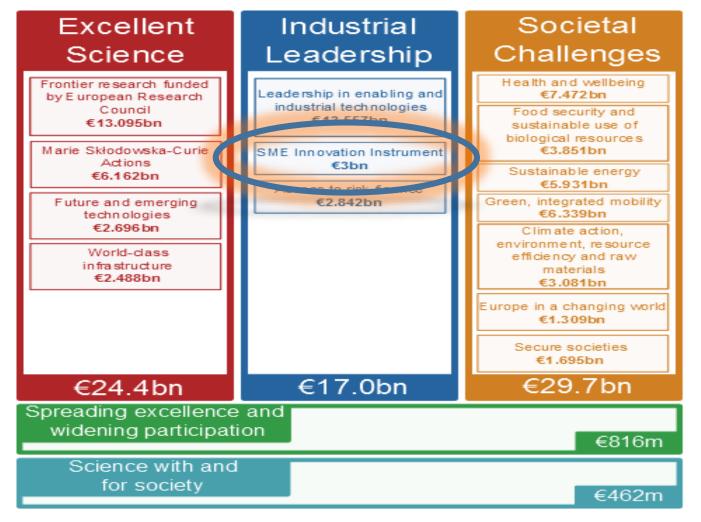
€816m

Science with and for society

€462m



#### Horizon 2020







## European Green Deal

- Will stimulate 1 Trillion Euros of public and private sector investment by 2030
- 1,000,000,000,000 Euros







## European Green Deal

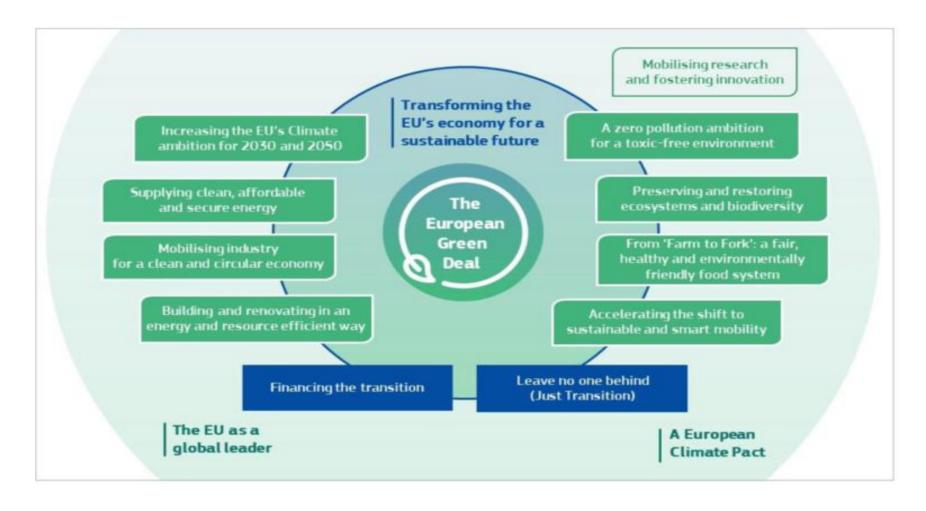
- Stricter emissions standards for vehicles and industries
- Revamped energy taxes
- New rules on subsidies for companies
- Environmental import tax/measures to prevent using regions with lower regulations
- Mechanism of 100 billion euros to help most affected regions
- Switch to greener farming practices
- Measures to prevent loss of biodiversity
- tougher air quality standards and a water quality action plan



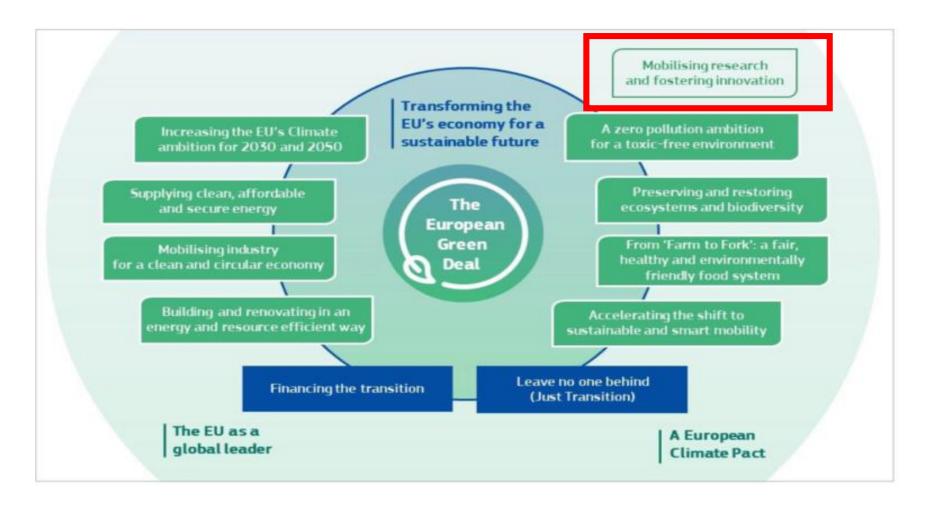












### Transition from SMEI to Accelerator...







#### The SME Instrument so far...



5322 Companies



€2.87bn. spend



5% - 8% success rate



See SME Instrument Accelerator Data Hub:

https://sme.easme-web.eu







## Key criteria for Accelerator projects...

#### Product, service or business model is:

- 1. Cross-border
- 2. High growth
- 3. Disruptive
- 4. Close to market
- 5. Scalable
- 6. At the prototype stage







#### 1. Cross-border

- European dimension
  - Relevance to Europe innovation, jobs, knowledge, etc.
  - Analysis of target markets
  - Look at competitors
  - 'Fit' with European goals









## 2. High Growth

The OECD defines a high growth business as:

'A firm with 10 or more employees that grows employees or turnover by an average 20%+ per year for 3 consecutive years.'

 Potential for high growth as a result of the project is also taken into account







#### Four Related Criteria

- 3. Disruptive
- 4. Close to market
- 5. Scalable
- 6. At the prototype stage



At Technology Readiness Level - TRL 6 - or above







## Degrees of Innovation

#### INCREMENTAL

Small changes which influence market share; the progressive advance of a product

#### STEP-CHANGE

More significant changes by adding new technology to give a major market lead

#### DISRUPTIVE (Criterion 3)

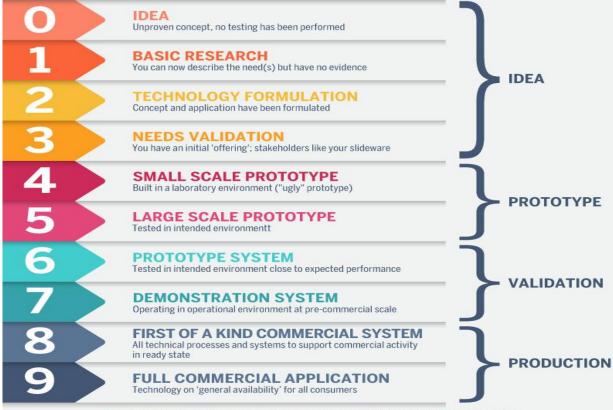
Creates new markets and value networks by disrupting the existing ones

## 3 - Disruptive Innovation



#### **MEASURE YOUR TECHNOLOGY READINESS LEVELS - TRL**

How technology ready is your service/product?



Technology Readiness Levels as adapted by the CloudWATCH2 project

Find out more about CloudWATCH2 TRL: http://bit.ly/TRL\_MRL



#### Criterion 4 – 'Close to Market'

**TRL 6 - PROTOTYPE SYSTEM** – Tested in intended environment; prototype close to expected performance.

**TRL 7 - DEMONSTRATION SYSTEM** — Operating in working environment at pre-commercial scale

TRL 8 - FIRST OF A KIND COMMERCIAL SYSTEM — All issues resolved and ready for market

**TRL 9 - FULL COMMERCIAL SYSTEM —** Fully available for market entry







#### Criterion 5 – 'Scalable'

'Demonstrates an ambition to significantly scale up production'

- Able to move from final prototype to mass sales:
  - Own production
  - Production under licence
  - Joint venture

## Criterion 6 – 'Minimum - at the Prototype Stage'

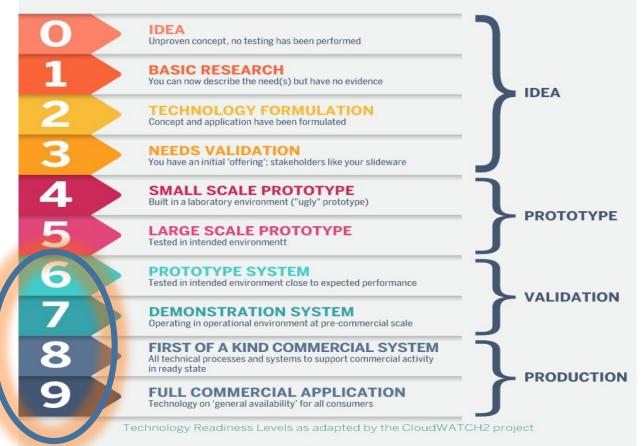






#### **MEASURE YOUR TECHNOLOGY READINESS LEVELS - TRL**

How technology ready is your service/product?



Find out more about CloudWATCH2 TRL: http://bit.ly/TRL\_MRL



# SMEI changed to Accelerator ahead of introducing Horizon Europe...









- 'Horizon 2020' will run up until 31st December 2020
- 'Horizon Europe' will then run for 6 years











- 'Horizon 2020' will run up until 31st December 2020
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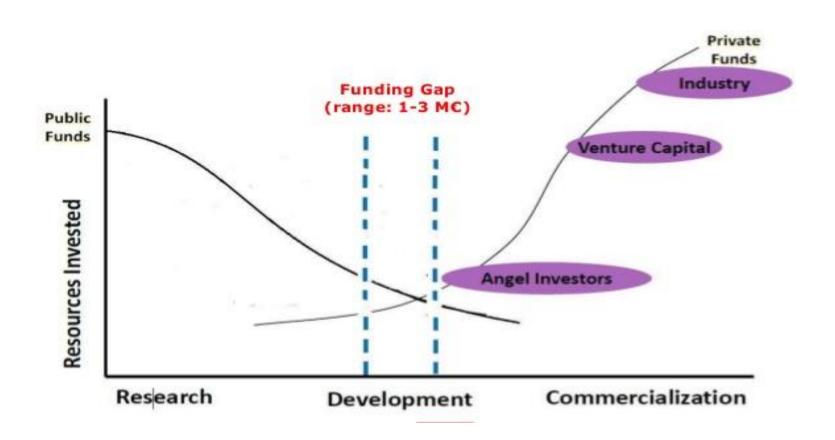
## What is the role of Accelerator?



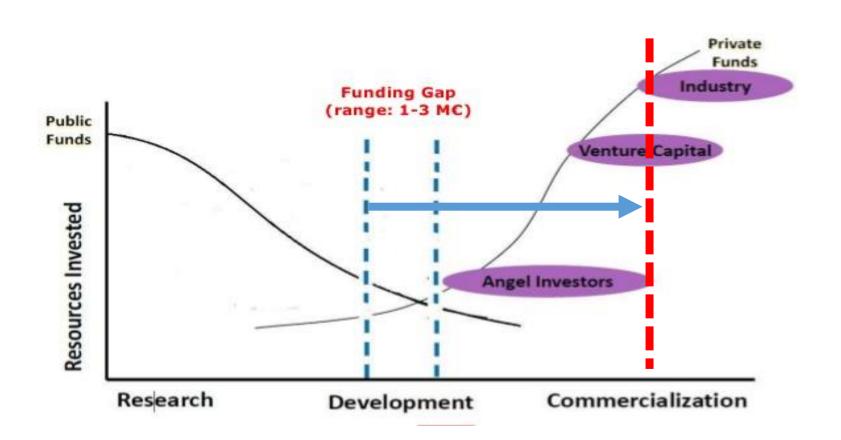












## Same basic logic...

- Lack of finance for breakthrough & disruptive innovators – Start-ups, SMEs, Entrepreneurs
- Estimated total equity-funding gap = €70bn.
- Many SMEs can't find high-risk capital needed to get to private investor stage
- ACCELERATOR bridges this gap in finance and risktaking







## Same basic focus...

- Three key aspects:
  - EXCELLENCE
  - IMPACT
  - IMPLEMENTATION Quality and efficiency
- High growth potential, high-risk applicants
- Disruptive innovations
- Sound business plans







## Same 3 Key Award Criteria...

**EXCELLENCE:** Does the project have high innovation potential beyond 'State of the Art'?

**IMPACT:** Does the project meet the pressing needs of European and global markets?

**IMPLEMENTATION:** Does the project have a coherent and efficient workplan, excellent team and strategic fit?







# Major policy shifts...

- Greater emphasis on COMMERCIALISATION
- ...even more emphasis on IMPACT
- NO thematic areas
- OPEN calls
- Greater involvement in private sector financing
- EC will also invest venture capital
- Seen as supporting SMEs which need 'One last push' before scaling up to market-ready products
- Longer term move from grants to equity investments







# So what is the funding?...

- Phase 1 grant support disappeared in 2019
- (Phase 2) grant support of 70% up to €2.5m is available to projects at TRL 6, 7 & 8
- 'Blended Finance' is also offered to projects at TRL
  6, 7 & 8
- Private sector/EC equity only is offered to projects at TRL 9
- Phase 3 as before; coaching and mentoring is available to all







## 'Blended Finance'

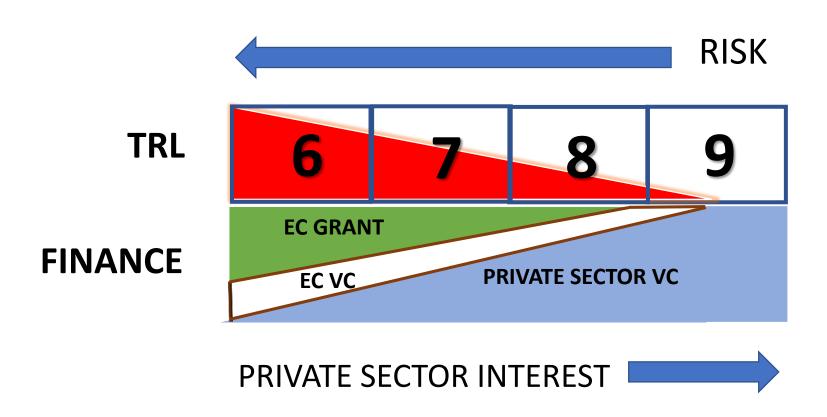
- A new development to get more engagement with private sector and better use of EC funding
- Grant plus loan and/or equity investment of up to €15m.
- EC to use a 'Special Purpose Vehicle' (EIC Fund) to make investments where private sector consider risks too great
- Any income to EC from equity investment will be put back into programme to fund further projects



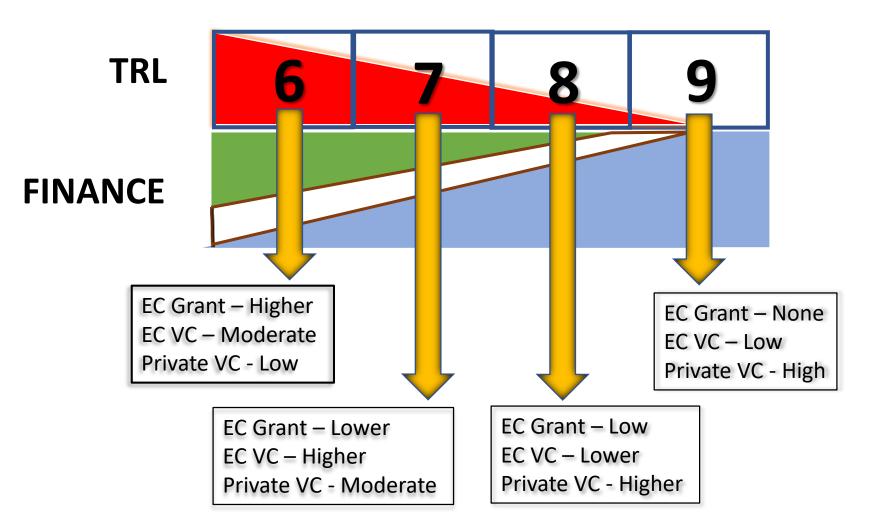




### Blended Finance; Risk versus Finance



## Blended Finance – What are your chances?



## Blended Finance has complexities...

- Applicants must decide on proposal submission if they are prepared to consider BF if offered
- If 'No', they may be offered a straight grant, but if rejected there will be no offer of BF
- EC will consider all applications for suitability for BF
- If applicants have agreed to consider BF and EC consider it suitable, they will decide on financing mechanism to be offered
- If due diligence fails; any grant offer will be withdrawn







## So, TRL is far more important...

- Essential to correctly assess your TRL(s) this will be the key to the type of funding offered
- Applicants agree to consider blended finance if evaluators conclude that project is suitable
- Investment part will be subject to due diligence by SPV (EIC Fund) team and/or private sector







# 'Due diligence'...

An investigation before entering into an agreement or contract...

- Review of product, market, customers
- Assessment of accounts; debts, turnover, profits, assets
- Management team
- Patents
- Ownership
- o Etc.

...gives confidence that investments will be safe and expectations will be realised.







# Remember, if equity investors are involved...

#### More cash, but...

- Greater scrutiny
- Greater adherence to milestones and results
- Pressure for a good return, to be achieved quickly
- Involvement in management

- Quicker to market
- Commercial approach
- More saleable company/product
- Possibility of more investment







# So, how do Turkish SMEs perform against the Key Criteria...

**EXCELLENCE:** Does the project have high innovation potential beyond 'State of the Art'?

**IMPACT:** Does the project meet the pressing needs of European and global markets?

**IMPLEMENTATION:** Does the project have a coherent and efficient workplan, excellent team and strategic fit?







### **EXCELLENCE**

- Great national success in building innovation capabilities
- Some excellent science & technological developments have resulted

- End focus often on getting more research/grants, not marketable products/services
- Little emphasis on responding to market needs
- Pursuit of science & technology instead of solving needs







### **IMPACT**

- Large Turkish market in need of innovative products
- Significant impact can be made nationally

- Can result in complacency more of the same
- Short-sighted on international markets, customers and competitive environment
- Can assume that foreign markets are simply an expansion of what is done nationally







### **IMPLEMENTATION**

- Enthusiastic and talented teams
- Aware of scientific and technical developments
- Support from MoIT, TÜBİTAK and other public sources

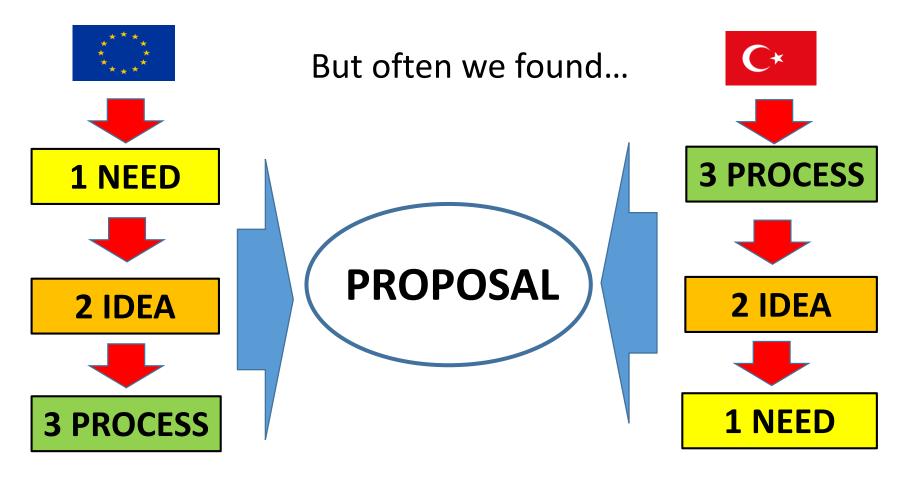
- Predominantly scientific/technical management teams
- Lack of marketing and commercial skills
- Lack of business strategy and business plans rocky existence as a result



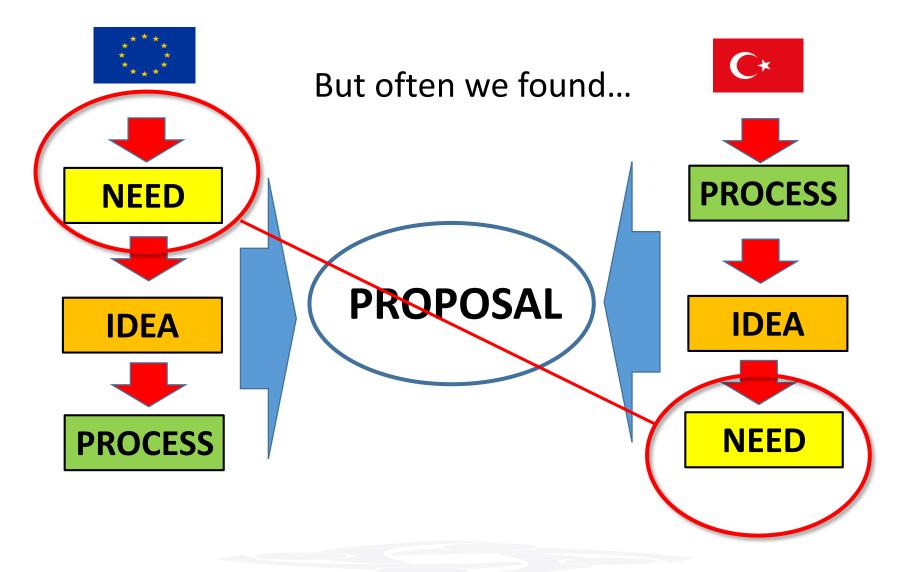




## So, when it comes to H2020 proposals...



# A problem of perception = training!



# Our project is here to help...



#### **Training Events**

- Introductory
- Focus Groups
- IPR
- Access to Risk Finance
- Webinars
- Lobbying
- Project Writing Camps



#### **SME Support**

- 1-to-1 Support
- Project Writing Training
- Pitching Workshop
- Feasibility Reports
- Investment Readiness



#### **Networking**

- Brokerage Events
- International Study Visits
- Award Ceremonies
- Conferences
- Info Days



#### **Tools**

- Website
- Helpdesk
- Training Guides

# Especially for SMEs

- 50 SMEs x 20h one-to-one Project Writing Support
- 12 Project Writing Trainings for SMEs (1-day) [8]
- 6 Project Writing Camps for SMEs (1-day) [3]
- 9 SME Instrument Webinars [6]
- 1 Pitching Workshop for SMEs
- 10 Feasibility Reports for Innovative SMEs
- 1 Investment Readiness Training [completed]









#### Contact us...













# Turkey in Horizon 2020 Phase II

Dr Dilem Hızlan

European Enterprise Network

http://www.turkeyinh2020.eu







## enterprise europe network

# Helping ambitious SMEs innovate and grow internationally



































## Boosting growth and jobs

The Enterprise **Europe Network is** a key instrument in the EU's strategy to boost growth and jobs.

2

Launched in February 2008 by the Commission's DG GROW (previously "Enterprise and Industry" ENTR)

Co-financed under the EU's **COSME** and **HORIZON 2020** funding programmes - encouraging competitiveness and innovation of **European SMEs** 

Total funding of over 180 million **EURO** 







































## Based in your region and connected to the world

































































#### Our services

https://een.ec.europa.eu/partners

iprhelpdesk.eu

innovist.eu

#### INTERNATIONAL PARTNERSHIPS

Partnership database

Brokerage events

Company missions

#### ADVISORY SUPPORT

Advice on EU laws and standards

Market intelligence

IPR expertise

#### INNOVATION SUPPORT

Access to finance and funding

Innovation Management Services

Technology transfer











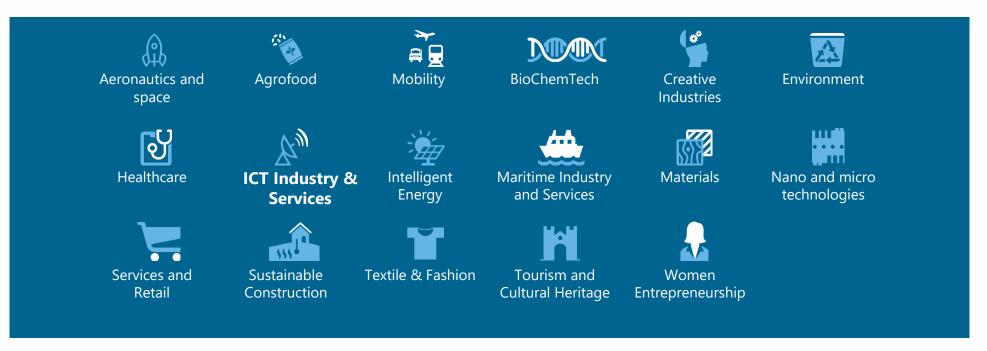






## 17 key sectors

Network experts in 17 key sectors have teamed up to provide you with customised support.











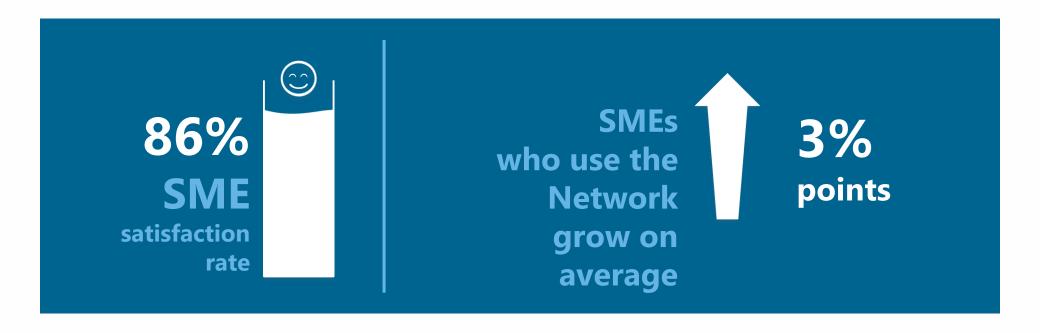








## It works! Satisfied, successful SMEs





















HOME THE NETWORK ADVICE AND SUPPORT PARTNERSHIP OPPORTUNITIES EVENTS SUCCESS STORIES BLOG



#### Helping companies innovate and grow internationally



International partnerships

Expertise, contacts and events to connect you with the right international partners to grow your business.



Advice for international growth

Expert advice for growth and expansion into international markets.



Support for business innovation

Solution-driven services to help you turn your innovative ideas into international commercial successes.



































#### **Contact us**

Dilem Hızlan, PhD dilem.hizlan@sabanciuniv.edu +90 216 483 96 48





















# Turkey in Horizon 2020 Phase II

Odysseas Spyroglou Legal & Financial Expert

http://www.turkeyinh2020.eu











Intellectual Property & Horizon 2020

Write a Better Proposal, Manage a Successful Project

Intellectual Property in EU Projects

SME Project Writing Training (PWT-SME-2) Workshop

Odysseas SPYROGLOU

H2020 Legal & Financial Key Expert







# Why IP is important for H2020 proposals?

- Projects must produce outputs/results
  - Results => benefits
    - Benefits = Impact

- Impact must be maximised
  - IP can help us







### IP Management is expected

- IMPACT: Intellectual Property, knowledge protection and regulatory issues
  - Explain key knowledge (IPR) items and who owns them.
  - Refer to results of any patent search carried out.
  - Results of "Freedom to operate analysis"?
  - Status and strategy for knowledge protection. Any patents?
  - Regulatory / standard requirements ?
  - Feasibility assessment?
  - Are you seeing any new market opportunity through regulatory requirements?







### 'Intellectual Property'

"A product of the intellect that has commercial value"









### 3 Main categories of intellectual property

- Industrial property: (patentable) inventions including 'software enabled inventions', trademarks, industrial designs, new varieties of plants and geographic indications of origin.
- Artistic work protected by copyright: original literary and artistic works, music, television broadcasting, films, software code, databases, architectural designs, advertising creations and multimedia.
- **Commercial strategies**: trade secrets, know-how, confidentiality agreements, or rapid production (secrecy is often associated with a contract of employment).







### How IP is created?

- Creativity
- Research
- Experimentation
- EXAMPLES:
  - Scientific Invention: electronics, drug, etc.
  - Product of Creativity: Movie, song, book, article, slogan, name, drawing, design etc.







# Why IP is important?

- Your ideas
- Your work
- Your business advantage
- A valuable asset that must be protected (it can be traded)







# But what are IP Rights (IPR)?

- "IP Rights (IPR) are the rights given to persons over the creations of their minds. They usually give the creator an exclusive right over the use of his/her creation for a certain period of time."
- e.g. Patents, Copyrights, Trade marks ...
  - \*According to WTO, World Trade Organisation







# Types of IP Rights

- Patents
- Copyrights
- Trademarks
- (Trade secrets)
- !!Protection still in national level rather than EU\*
- Apply to European Patent Office but European patent needs to be <u>validated by the national patent office in</u> each country where protection is required.







# Patents & Rights (5+1)

A granted patent for a product confers on its **own**er the following exclusive rights:

- 1. Making/Using
- 2. Offering for sale (advertising)
- 3. Selling
- 4. Importing in to the protected territory;
- 5. Storing in the protected territory.
- Patent and other IP rights are limited by territory and term.
- Patent owners shall also have the right to **assign**, or **transfer** by succession, the patent and to conclude **licensing** contracts.







# Can you submit a patent? Yes, but.

- Must meet patentability requirements
- Still depend on Jurisdiction
- In Europe: Claim must define: Technical solution to technical Problem





Method and apparatus for switching touch screen of handheld electronic apparatus EP 2184671 A1



Method for encouraging customers to buy local by giving a discount on future purchases.







### Patentability Filter: Technical Character (EPO)

- 3 Expert examiners
- Search Report + Patentability Requirements
- Are there technical features that solve a technical problem?
  - E.g. smart grids, security, data compression, secure payments
- Non-technical features cannot contribute to inventive step
- Mere interaction with tech elements not enough
- Business/Model Innovation + Technical solution







# Copyrights

- Providing protection to creators (writers, artists, music composers, etc.) on their creations. ("works")
- Does NOT extend to ideas, only to expression of thoughts.
- No need for registration (some countries have a system)
- Types of rights:
  - Economic: financial reward / reproduction, distribution, public performance, broadcasting, translation, adaptation.
  - Moral: attribution / recognition, fame, right to object to changes, adaptations
- Protection: companies or organisations of creators
- Duration: usually 50 years after a creator's death











protecting your intellectual property

# Creative Commons Licenses

Some Rights Reserved

These licenses allow for a more flexible management of the exclusive rights offered by copyright protection, giving the creators the ability to choose the kinds of protections and freedoms that will govern the use of their work

### **Key License Terms:**

# BY

### Attribution

Others can copy, distribute, display, perform and remix your work if they credit your name as requested by you



#### No Derivative Works

Others can only copy, distribute, display or perform verbatim copies of your work



### Share Alike

Others can distribute your work only under a license identical to the one you have chosen for your work



#### Non-Commercial

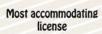
Others can copy, distribute, display, perform or remix your work but for non-commercial purposes only

Most restrictive license























### **Trademarks**

- Sign used to identify certain goods and services by someone (person or enterprise)
- Can consist of a word, combination, abbreviations, names, drawings (logos), 3D shapes, colors, even music.
- Must be distinctive
- Types of trademarks (in addition to commercial):
  - Collective: members of an organization, union
  - Certification: comply with a set of standards
- Protection: Registration in country Trade offices
- Duration: usually 10 years, renewed indefinitely







### The 5 categories of trademarks

#### A GUIDE TO CHOOSING THE RIGHT TRADEMARK



Trademarks are divided into five different categories, which are ranked by distinctiveness.

TRONG

#### Fanciful trademarks

Fanciful trademarks are made-up words which are invented to be used as a trademark name.







#### Arbitrary trademarks

Arbitrary trademarks are words that have a real, common meaning but they are completely unrelated to the product or service.







#### Suggestive trademarks

Suggestive trademarks are named after a characteristic of the product or service.







#### Descriptive trademarks

Descriptive trademarks are a description of the product or service.







#### Generic trademarks

Generic trademarks cannot be protected as they are simply a generic description of the product or service.



























#### **Word mark**

A word mark is represented using words, letters, numbers or any other characters that can be typed.

**View examples** 



#### **Figurative mark**

A figurative mark is represented using pictures, graphics or images; a figurative mark does not contain words or letters.

**View examples** 

Basic fee	850,00 €
Extra Class Fee	0,00€
Total classes	0
Total fee	850,00 €



### Figurative mark containing word elements

A figurative mark containing word elements combines the use of pictures, graphics or images with words or letters.

**View examples** 

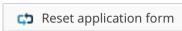
**View examples** 



#### 3D mark

A three-dimensional mark is represented using a three-dimensional shape, such as the actual product or its packaging.

**View examples** 









#### **Sound mark**

A sound mark must be represented graphically using, for example, musical notation (score music).



### 3D mark containing word elements

A 3D mark containing word elements combines the use of a three-dimensional shape with words or letters.

**View examples** 



# **Industrial Designs**

- Ornamental or aesthetic aspect of an article: 3D features, shape, patterns, lines or color (instruments, watches, jewelry, houseware, electrical appliances, vehicles, architectural structures, textile designs, etc.)
- Must "appeal the eye" (aesthetic)
- Protection: Registration in country authorised agencies/trade offices
  - Prevent unauthorised copying or imitation
  - license or authorize others to use
- Duration: usually 5 years, renewed up to 15







#### Definition



According to Article 3 of the Design Regulation, a design is the appereance of the whole or a part of a product resulting from the features of, in particular, the lines, contours, colors, shape, texture and/or materials of the product itself and/or its ornamentation. Learn more.

#### **Examples of design**











Packaging of products RCD 000785522-0001

A product / set of products RCD 000465679-0016

Composite products RCD 000408166-0001

Parts of products RCD 229752-0001









Logos RCD 000754098-0001

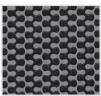
Computer icons RCD 000600184-0008

**Typefaces** RCD 000108584-0001

Drawings and artwork RCD 000569868-0001



**Get-ups** RCD 000521760-0001



Ornamentation RCD 000614656-0002



Web design RCD 001100598-0009



Maps RCD 000197405-0001







Reset application form

Print

https://euipo.europa.eu



### **Trade Secrets**

- Confidential Business Information
- Provides a competitive edge for the company
- Not registered but Kept Secret
- Protection:
  - Through legal binding agreements: Non disclosure, confidentiality, etc.
- Duration: indefinitely







### Your IPR Toolkit

Tools	What	Registration
Copyright	All Creative: Code, user guides, icons, graphical elements	AUTOMATIC
Patent	Functionality, new inventive technical effects	YES* (US, Debatable in EU)
Trademark	Logo, name (Visual & Textual)	YES (EUIPO)
Industrial Design	Graphic User Interface (GUI) under requirements	RECOMMENDED (EUIPO)
Database Rights	Output of process	NO
Contractual Agreements	Secrets, Confidential Info	NO

Very useful: Fact sheet from EU IPR Helpdesk

https://www.iprhelpdesk.eu/Fact-Sheet-IPR-Management-in-Software-Development







## What about your data?

- Horizon 2020 requires Data Management Plan (DMP)
- DMP describes data management life cycle for all data sets collected, processed or generated by the research project.
- Needs description in the proposal







### Which Data?

- How you manage research data generated / collected during the project?
  - What types of data?
  - What standards?
  - How will data be exploited / shared / made accessible for verification and re-use?
    - If data cannot be made available, why?
  - How will this data be curated and preserved?
- Appropriate CA to manage ownership / access to knowledge (IPR, data etc.).







## Many tools to consider

- https://creativecommons.org
- Legally share your knowledge and creativity to build a more equitable, accessible, and innovative world.
- https://opendatacommons.org
- Provides legal solutions for open data.
- Run by <a href="https://okfn.org">https://okfn.org</a>







## What is Open Access?

 Practice of providing on-line access to scientific information that is free of charge to the enduser.

### • H2020:

- Outline strategy for knowledge management and protection.
- Include measures to provide open access (free on-line access, such as the 'green' or 'gold' model) to peer-reviewed scientific publications.







# Open Access Publishing

- GOLD: article immediately provided in open access mode by scientific publisher.
- Associated costs by organisation to which the researcher is affiliated, or to the funding agency supporting the research.
- GREEN: Self-archiving. Article archived in online repository before, after or alongside its publication.
- Access often delayed ('embargo period').
- Some scientific publishers may wish to charge for access during an exclusivity period.
- BOTTOMLINE: You have to think about it beforehand!







# Beyond licensing

- A full strategy for IP and innovation
- A business model
- An Exploitation plan
- Technology Transfer/Dissemination







## Sources and more reading

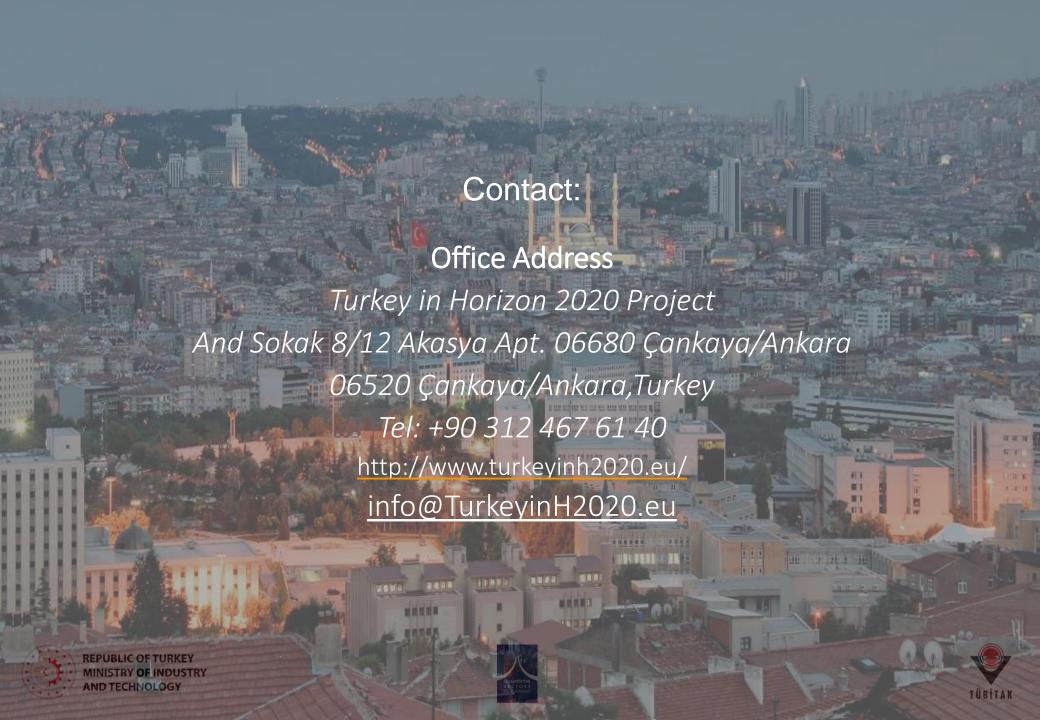
- European IPR Helpdesk: <u>https://www.iprhelpdesk.eu</u>
  - Guide to IPR (EU Helpdesk)
  - Fact Sheets on IPR in Proposal Stage
- THE EU SINGLE MARKET: Intellectual Property
- WIPO: <a href="http://www.wipo.int">http://www.wipo.int</a>
  - WIPO Academy (<u>http://www.wipo.int/academy/en/</u>)
- WTO: Trade-related aspects of IPR
  - https://www.wto.org/english/tratop\_e/trips\_e/trips\_e.htm
- EPO: <u>https://www.epo.org/</u>
- TURKEY Specific:
  - Turkish Patent Institute: <a href="http://www.tpe.gov.tr/">http://www.tpe.gov.tr/</a>
    - International Chamber of Commerce: <u>Promoting and Protecting IP in Turkey</u>

















# **Project Writing Camp for SMEs**

Istanbul, 24th January 2020

http://www.turkeyinh2020.eu











# Turkey in Horizon 2020 Phase II

Grigoris Chatzikostas

**Training Coordinator** 

http://www.turkeyinh2020.eu











Technical Assistance for Turkey in Horizon 2020 Phase-II EuropeAid/139098/IH/SER/TR

# Turkey in Horizon 2020 II

Horizon 2020 SME Instrument (EIC Accelerator) – Project Writing Camp for SMEs

Understanding the evaluation process and expectations of evaluators

Grigoris Chatzikostas

Training Coordinator

Istanbul, 24/01/2020







# **Grigoris Chatzikostas**

### Training Coordinator in "Turkey in Horizon 2020 – Phase II" project



Managing multi-national and cross-sectoral consortia, writing proposals for EU funding and coordinating large-scale projects that promote tech-enabled entrepreneurship in various sectors such as agrifood, ICT, environment, health, manufacturing, entrepreneurship etc.

Training, coaching, mentoring and supporting researchers and innovators on issues related to proposal writing for EU funding opportunities, project management of EU funded projects, IPR management and entrepreneurship, in countries such as Greece, Serbia, Turkey, Tunisia, Poland etc

## 15yrs

Experience in EU projects



1st position in Serbia in attracting H2020 funds

### 100+ m€

Total value of projects managed







### PROJECTS (INDICATIVE)





























### **EVALUATION EXPERTS: GENERIC ADVICE**











For most evaluators,
English is not their first language.

Evaluators are human!
They can get bored, tired, ill, confused...

The proposal must be easy to follow, even by a nonexpert.

for the evaluators to find the key points relevant to the Call and to the evaluation criteria.

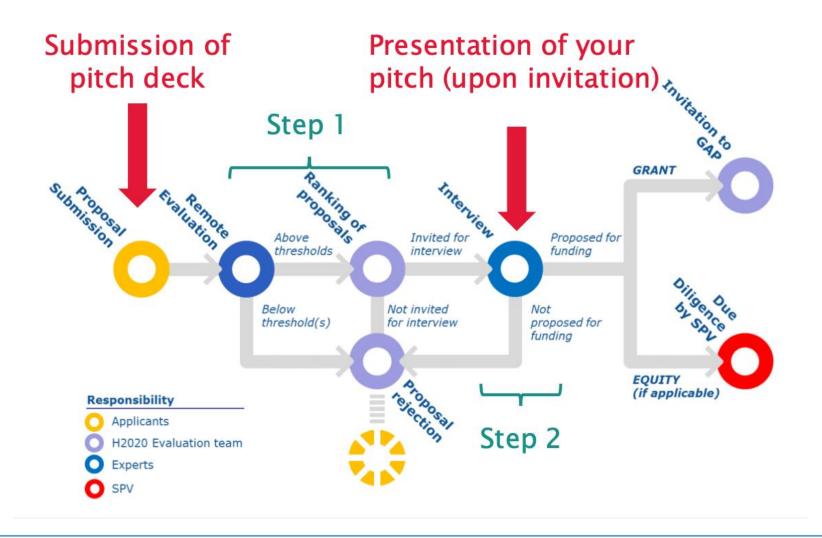
Evaluators might not have time to read every word of your proposal.







### **EIC ACCELERATOR EVALUATION PROCESS**









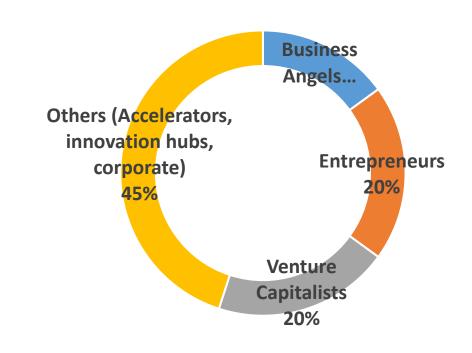
### **EIC ACCELERATOR EVALUATORS: WHO ARE THEY?**

# FIRST STEP: INDEPENDENT EXPERT EVALUATORS

### **Remote Evaluation**

- Technology
- Business
- Finance







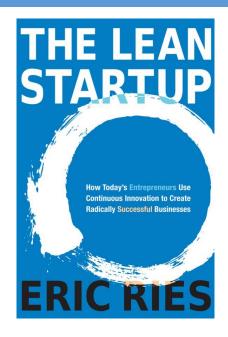
https://ec.europa.eu/easme/en/section/sme-instrument/evaluations-eic-accelerator-sme-instrument#inline-nav-1

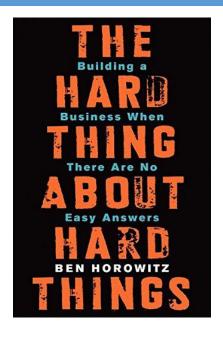


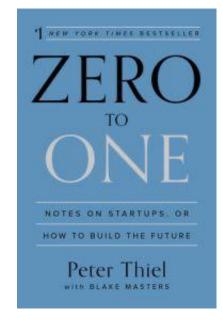


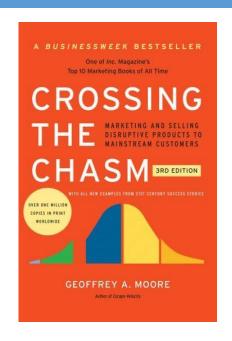


### **EIC ACCELERATOR EVALUATORS: HOW THEY THINK?**

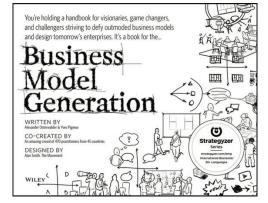








**SUGGESTION** 



MANY OTHER GOOD BOOKS







### **EIC POLICY BAKGROUND: FAST**



It's time for Europe to act **FAS**1!







### **EIC POLICY BAKGROUND: FAST**

**1. Funding.** — Breakthrough innovation, in particular deep tech, requires large investments, over a significant time period. This is the kind of finance that is missing in Europe and presents a systemic failure: venture capital is too small, fragmented, short term, concentrated on digital, not enough oriented towards deep-tech and lacking critical mass for patient capital. Bank lending, Europe's predominant investment channel and inherently risk averse, is not adept at supporting breakthrough and deep-tech innovation. Public support for innovation – including EU support - is perceived as complex, slow, designed for R&D and fails to bridge the gap to private investment.







### **NON - BANKABILITY**

**Non-bankability**: "The inability to attract sufficient funding" due to the high-risk level or a market failure"

- No revenues and no assets at all
- Not enough assets to be able to generate revenues
- Not yet profitable commercial activities
- Not yet attractive to other investors

An applicant may have secured on its side **co-investors ready** to partially finance the project activities, **on the condition of receiving additional investments** such as EICs'. In such a case, the company shall **not be considered as bankable**.





### **NON - BANKABILITY**

#### RISK vs POTENTIAL

If the level of **risk** is high but **so is the potential**, the project will be deemed non-bankable and therefore can be supported by the EIC Fund.

It is expected that the financing granted by the Enhanced EIC Pilot will **decrease** the level of risk, hence attract co-investors that would otherwise abstain.

### WHY IS THE PROJECT NON-BANKABLE?

- ☐ Lack of attractiveness from business perspective?
- Result of a systematic risk capital market gap?
- Present shareholding structure being a constraint?







### **EIC POLICY BAKGROUND: FAST**

**2.** Awareness. — Europe needs a flagship initiative on breakthrough innovation that can attract the best innovators and connect local and sectorial ecosystems.

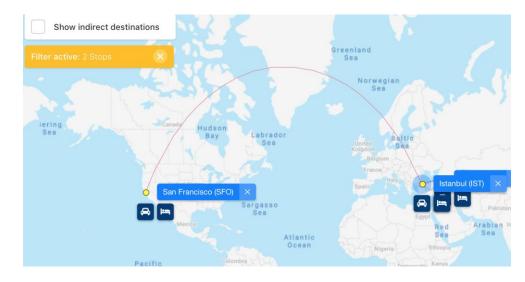






### **EIC POLICY BAKGROUND: FAST**

**3.** Scale. — Europe needs continental scale to compete at global level. It cannot compete with the US or China on the basis of national and local initiatives. European start-ups should not be forced to relocate to the US to access larger financing rounds.







### **SCALABILITY**

**Scalability:** A company's ability to maintain or improve **profit margins** while **sales volumes** increase.

### **HOW TO DEMONTRATE SCALABILITY?**

- ☐ Scalable business model
- ☐ Motivated and capable team
- ☐ Substantial demand
- ☐ Favorable market conditions
- ☐ Well defined financial needs
- ☐ Realistic financial projections





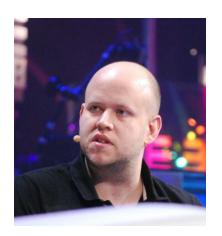




### **EIC POLICY BAKGROUND: FAST**

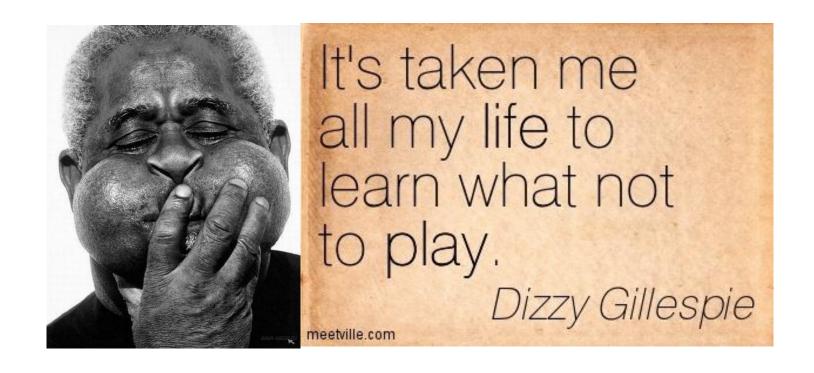
**4.** Talent. — Europe needs role models and champions. Its funding needs to empower people, create a culture of risk-taking and stimulate entrepreneurship rather than encouraging risk avoidance and paper shuffling.











**PAGE LIMIT: 30 PAGES** 









### **DOs**

- Ask different people to check the whole text
- Make sure formatting is according to specs
  - Make sure .pdf looks like word document
- Look at all questions in the platform upfront so that you have answers

DOWNLOAD AND CHECK AFTER YOU SUBMIT!



### DON'Ts

Keep the proposal in separate files

Use different computers/ versions of software

Forget to fill in all tables and Sections

Submit the last moment of the deadline

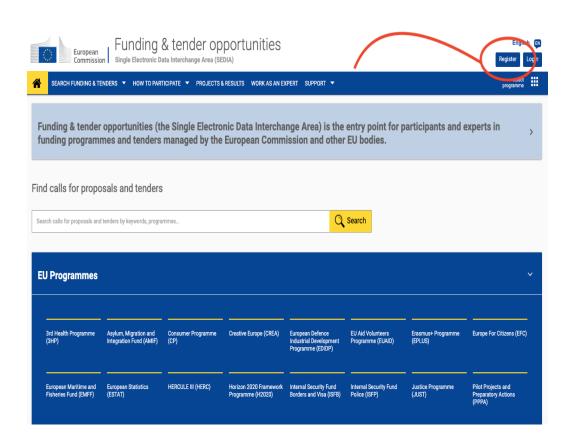
MAKE IMPORTANT CHANGES IN THE LAST MOMENT

TIP: Start making trial submissions a couple of days before the deadline to test the system, BUT make sure that at the end you have the correct version uploaded!

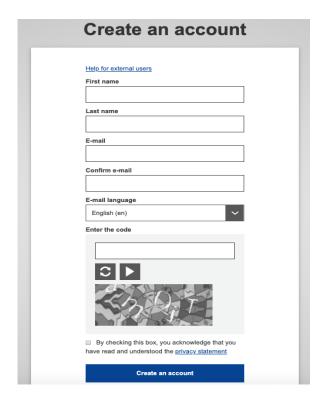








# Step 1: Create a new user









# **Step 2:** You will receive a confirmation e-mail. Confirm your email and create your password.

Dear ....

You have been registered in EU Login.

Your email address is missestalia

To create your password, follow the link below:

#### this link

You have a maximum of 24 hr, starting from the time that this message was sent, to create your password, but you are encouraged to do so immediately if possible. After this time, you can make another request by following the same link: you will then need to re-enter your username and confirm your request.

If the above link does not work, you can copy the following address (make sure the complete address is copied!) and paste it into your browser's address bar:

https://webgate.ec.europa.eu/cas/init/initialisePasswordLogin.cgi?

wayf.domain=external&wayf.remember=checked&wayf.submit=Select&uid=n002oz0j&resetCode=y0FElb1yacy0MoCwqTa AzzoGzZ64R9N4OpCJr0TkN3Bq&service=https%3A%2F%2Fec.europa.eu%2Finfo%2Ffundingtenders%2Fopportunities%2Fapi%2Fauthentication%2Flogin.html%3Ffrom%3Dhttps%3A%2F%2Fec.europa.eu%2Finfo% 2Ffunding-tenders%2Fopportunities%2Fportal%2Fscreen%2Fmyarea%2Fproposals

Instead of replying to this message, if you have a problem, please follow the help or contact information on the site where you were trying to register.

Note that it may take up to 5 minutes after reception of this mail before the above-mentioned site will recognize your registration.

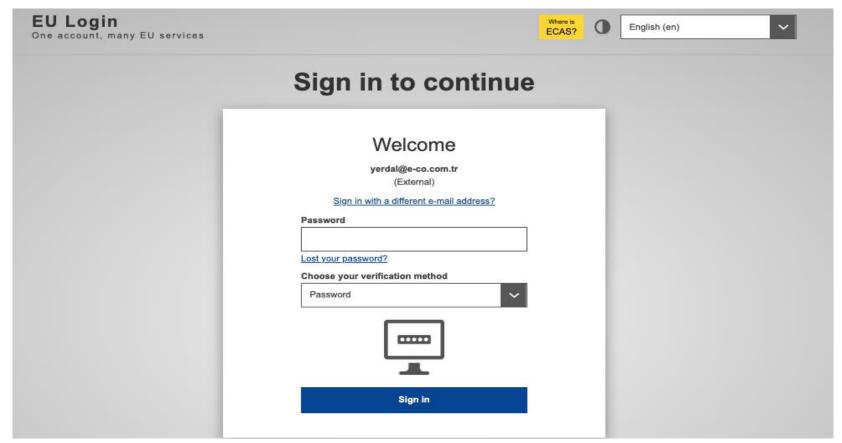
Sent to you by EU Login







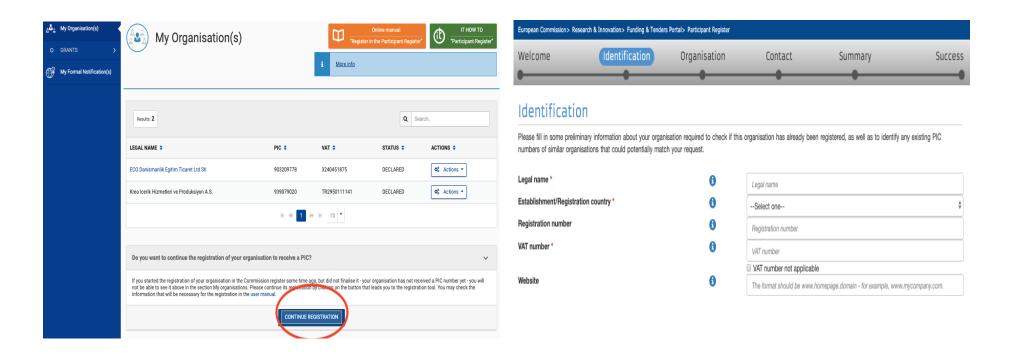
# Step 3: Login with your email and password











**STEP 4:** Register your company





















Technical Assistance for Turkey in Horizon 2020 Phase-II EuropeAid/139098/IH/SER/TR

# Turkey in Horizon 2020 II

Horizon 2020 SME Instrument (EIC Accelerator) –
Project Writing Camp for SMEs
Section 1: Excellence

Grigoris Chatzikostas

Training Coordinator

Istanbul, 24/01/2020







### **PROPOSAL TEMPLATE**

# EIC Accelerator Pilot – Proposal template

#### **Document 1 - Proposal template**

#### **Summary**

#### 1. Excellence

- Idea and solution
- Innovativeness
- Stage of development

#### 2. Impact

- · Market and customers
- Commercialisation strategy
- External Strategic Partners
- Intellectual property
- Scale up potential
- Key Performance Indicators
- Broader impact

#### 3. Implementation

- · Team and capabilities
- · Financing needs
- Equity (if blended finance requested)
- Need for EIC support
- Risks
- Approach
- Work packages, deliverables, milestones
- Resources

#### Document 2 - Annex 1 - 3

- Annex 1 Security and Ethics;
- Annex 2 CVs
- Annex 3 –Others

#### **Documents 4 and 5**

Annex 4 – Financial and corporate information Excel file

Annex 5 - Pitch-deck







### **INTRODUCTION**

Describe your innovation in no more than 200 words, avoiding jargon or technical language.

Briefly explain, in no more than 200 words, how your innovation relates to the overall strategy of your company.





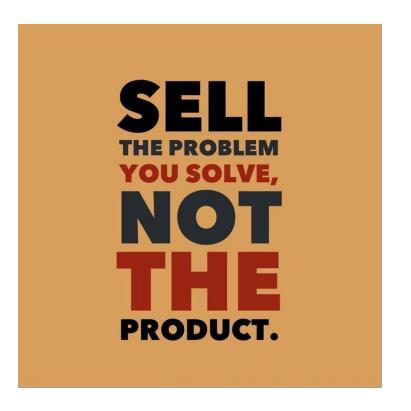


### **IDEA AND SOLUTION:**

Innovation in detail

What are the objectives

What are the challenges or problems – business, technological or societal (climate change, environment, gender dimension, etc.) - that you seek to address by bringing your innovation to market.









## **INNOVATION IN DETAIL**



- 1. Multispectar camera
- 2. Stereo-camera
- 3. LIT-MS
- 4. LIDAR
- 5. Robot electronics compartment
- 6. Spraying mast with nozzles
- 7. Spraying tank (130l)
- 8. GNSS antenna
- 9. Meteo sensor
- 10. Sonar ring
- 11. Batteries
- 12. Rotating base for the perception sensors (1,2,3)





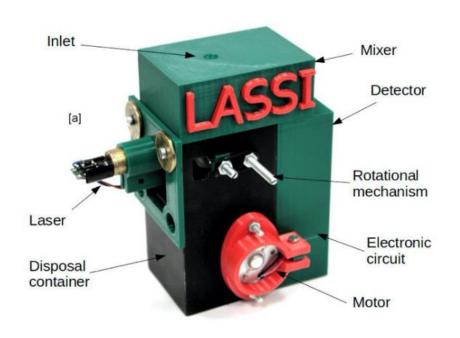


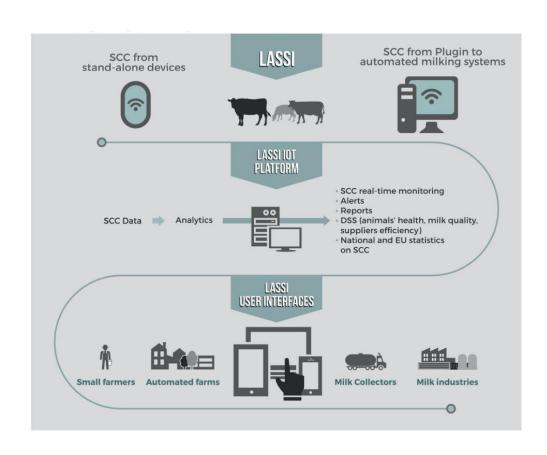






## **INNOVATION IN DETAIL**









### **OBJECTIVES**

# Your objectives MUST be in line with call objectives!

- ✓ How will you verify that each objective has been met?
- ✓ What measures will be used?
- ✓ How does each objective relate to the call?

### Make clear clasification (if aplicable)

- ✓ Industrial objectives
- ✓ Economic objectives
- ✓ Social objectives

### For each objective also record:

- ✓ Relationship to the call: **Achievable**
- ✓ Critical assumptions:
- √ (Timescales will be added later): Time bound







### **OBJECTIVES**

GO

The general objective of the project is to transform the existing Somatic Cell Counter prototype (TRL 6), based on flow cytometry coupled with fluorescence techniques, to a market-ready comprehensive solution (TRL 9) providing analysis, monitoring, and reporting on animal health and milk quality to dairy farmers and the dairy industry.

The starting point for the project is the prototype of a Somatic Cell Counter based on fluorescent flow cytometry, which has been tested in the lab and in a real world environment, with excellent performance in both cases. Based on this, two preproduction prototypes will be developed (the LASSI Somatic Cell Counter devices: a stand-alone device and a unit that will be integrated in Automatic Milking Systems). The devices will be bundled with an Internet of Things (IoT) platform (the LASSI platform) into the LASSI solution, which will provide services such as analysis, monitoring, and reporting on animal health and milk quality. The LASSI solution will provide dairy farmers with a Decision Support System (DSS) on animals' health, reports on animals' health history and milk quality logs, enabling them to rapidly diagnose mastitis by knowing the somatic cell count on individual cows, and save costs. The dairy industry will use the LASSI solution for determining remotely SCC on bulk milk quantities before loading it for transport, and for monitoring the quality of farms they cooperate with.

The specific objectives of the project are:

01

Advanced and specific development that will evolve the existing prototype to two separate pre-production prototypes:

- Stand-alone, portable, handheld SC Counter;
- Live measurement unit to be integrated into the milking system.

Based on the core device, **two pre-production prototypes** will be developed. The **handheld** device targets the issue of bulk milk quality control at the time of milk purchase from farmers. The **live measurement unit** will be developed to be integrated into Automatic Milking Systems (AMS), allowing continuous monitoring of SCC at the time of milking. The advanced development will include perfection of various system parts: lens, detector, rotational mechanism, and cleaning mechanism, in order to further improve the SC Counter's performance. Furthermore, it will include the design of the housing for both devices, and the implementation of the automatic sampling system for the automatic SC Counter.

Objective	Key Performance Indicators (KPIs)	Target values
Od: Brototuno	Time to design and integrate the industrial prototype of the handheld device	6 months
O1: Prototype	Time to design and integrate the industrial prototype of the automatic device	6 months
Development	Improvement of the accuracy of the device	±7%
O2: Solution	User interfaces meet usability needs of the users	85%
Development	Acceptance of the proposed services by users	90%
	No. of full systems for milk quality control installed	1
O3: Validation	Number of full systems for cow health control installed	1
	Success rate of the performed system validation tests	90%
	No of devices provide three for testing (bondhold)	40







## THE PROBLEM

QF4 Please tell me to what extent you are worried or not about the following issues.

Answer: Total 'Worried'

"Higher levels of Worry"

"Higher levels of Worry"											
Pesticide residues in fruit, vegetables or cereals		Residues like antibiotics or hormones in meat			Pollutants like mercury in fish and dioxins in pork			Cloning animals for food products			
	EU27	72%		EU27	70%		EU27	69%		EU27	65%
	EL	91%	<b>(</b>	CY	92%	<b>(</b>	CY	85%	<b>(</b>	EL	76%
<b>(</b>	CY	90%		EL	87%	$\mathbf{O}$	IT	83%	$\mathbf{O}$	IT	75%
	LT	88%		LT	84%		LT	82%		LU	75%
	SE	59%	<del></del>	UK	53%		NL	57%		EE	48%
	NL	53%		SE	50%	<del></del>	UK	51%	$\mathbf{O}$	IE	48%
	UK	53%	$\bigoplus$	FI	48%		SE	46%		MT	48%

Figure 1: Pesticide residues - The major food-related concern of European citizens (Source: Eurobarometer 354)



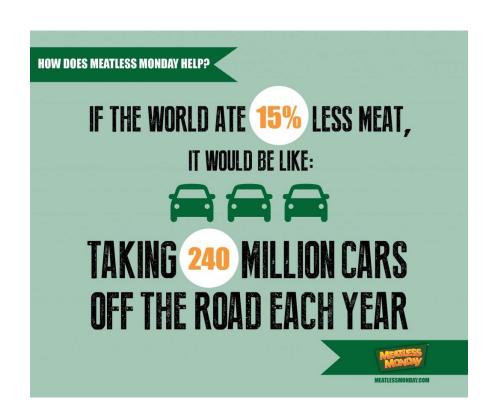




### THE PROBLEM

# The Big Picture

- 1) Population growth
- 2) Shifting economic power
- 3) Environmental concerns









### ... BUT STILL



### We use protein for

- Bone, muscle, skin, organs, hormones, enzymes
- Brain chemistry cognition and mood
- We need protein approximately every 3-4 hours to stimulate the thyroid and to balance blood sugar levels
- Metabolism
- Specific amino acid functions

# If we don't replace it = deficiency symptoms

- Loss structures e.g. skeletal muscle
- Brain chemistry imbalance
- Fatigue, loss energy
- Slower metabolism, weight loss or gain
- Mood imbalance
- Cognitive dysfunction (ie. reduced focus, memory)







# THE ALTERNATIVE PROTEINS CONCEPT





Types are classified based on sources: Insect based, Plant based, Lab grown meat





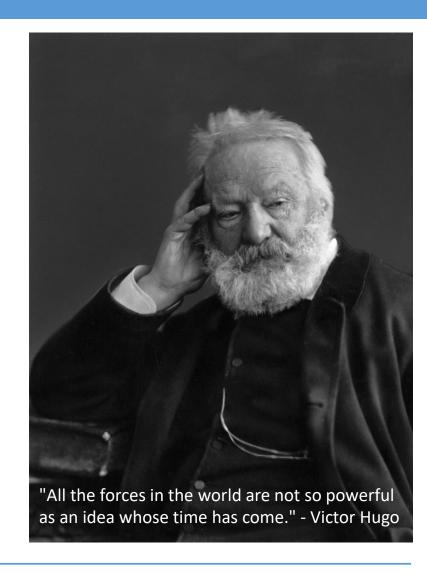




## **INNOVATIVENESS**

How is your innovation better or significantly different than other existing alternatives?

Why is the timing right for your innovation?









# **COMPARISON TO EXISTING ALTERNATIVES**

Table 6: Technical characteristics of the competitive solutions

	Test tape method (Porta SCC)	California Mastitis Test (CMT) (Ekomilk SCAN)	Automatic counting based on image cytometry technology (DeLaval Cell	Automatic counting based on flow cytometry technology (Fossomatic™ FC)	LASSI
			Counter)	(	
Measuring speed	45 min for regular, and 5 min for quick test	4 min/measurement	·	200, 300, 400, 500 or 600 samples/hr	100,000 to 1,000,000 somatic cells per ml in laboratory conditions in less than 60 seconds
Measuring range	100.000 - 3.000.000 somatic cells/ml	90.000 – 1.500.000	10.000 to 4.000.000 somatic cells/ml	0 – 10 mill cells/ml	100,000 to 1,000,000 somatic cells per ml
Sample intake	2 ml	10 ml	Approx 60 µl in the cassette / Measuring volume: Approx 1 µl	2.5 ml (programmable 2.0 – 5.0 ml)	2 ml
Required sample temperature	0 - 8°C	15° - 30°C	10° - 40°C	30 - 42 °C	15 – 25 °C
Sample types	Bulk tank or individual sample	Bulk tank or individual sample		Cow's, goat's, sheep's milk and other	Any type of milk, bulk or individual animal.
Dimensions (HxWxD)		20 x 26 x 29 cm	23,5 x 23,6 x 24,9 cm	63 x 85 x 68 cm	10 x 10 x 5 cm
Weight	Digital reader ~ 200 g Tapes – N/A	< 4,5 kg	4.1 kg	100 kg	<1kg
Power supply	N/A - manual	AC Power Supply voltage 220V +10%/- 15% / DC Power Supply voltage 12V to 14,2V		100 - 240 VAC, 50/60 Hz	12V DC power supply
Portable	Yes - handheld	Yes - tabletop	Yes – tabletop	No	Yes - handheld
Customers	Dairy farmers & milk industry companies	Dairy farmers & milk industry companies	Small milk laboratories and dairy farmers	Laboratories	Dairy farmers & milk industry companies
User level	Non-expert	Non-expert	Non-expert	Expert	Non-expert
Price range	<100 €	1 – 3 k €	<10 k €	> 10 k €	250 €







### **TIMING: HYPE CYCLES**

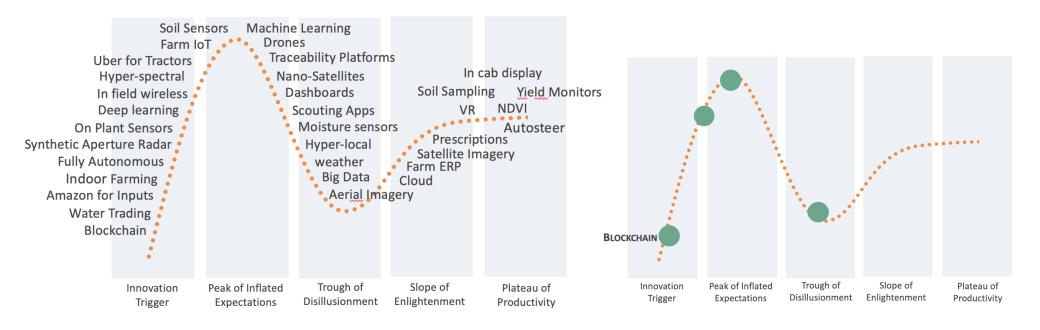
- Innovation Trigger: A potential technology breakthrough kicks things off. Early proof-of-concept stories and media interest trigger significant publicity. Often no usable products exist and commercial viability is unproven.
- Peak of Inflated Expectations: Early publicity produces a number of success stories often accompanied by scores of failures. Some companies take action; many do not.
- **Trough of Disillusionment:** Interest wanes as experiments and implementations fail to deliver. Producers of the technology shake out or fail. Investments continue only if the surviving providers improve their products to the satisfaction of early adopters.
- Slope of Enlightenment: More instances of how the technology can benefit the enterprise start to crystallize and become more widely understood. Second- and third-generation products appear from technology providers. More enterprises fund pilots; conservative companies remain cautious.
- Plateau of Productivity: Mainstream adoption starts to take off. Criteria for assessing provider viability are more clearly defined. The technology's broad market applicability and relevance are clearly paying off.







### **TIMING: HYPE CYCLES**









### **STAGE OF DEVELOPMENT:**

Current stage of development) Technology Readiness Levels),

Activities and results achieved so far.

Next steps planned to take this innovation to the market?

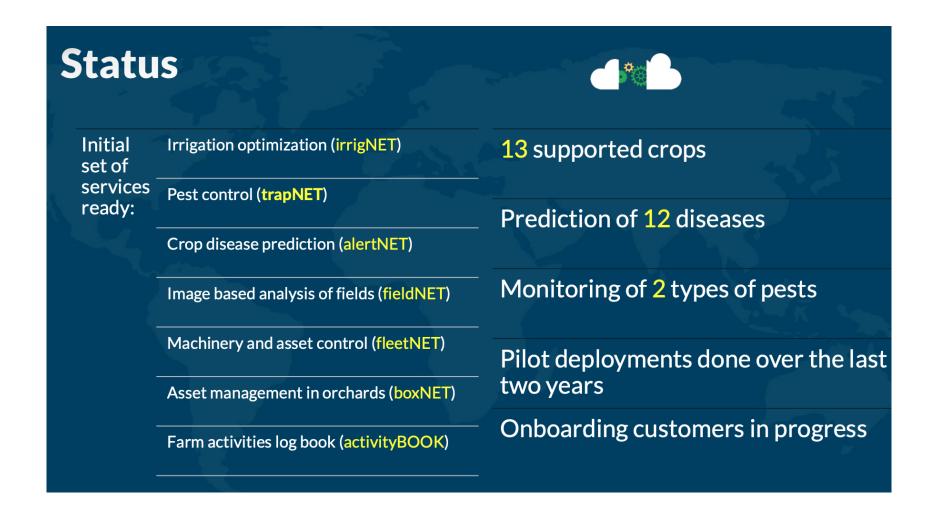








## **CURRENT STAGE OF DEVELOPMENT**









#### **ACTIVITIES AND RESULTS ACHIEVED SO FAR AND NEXT STEPS**

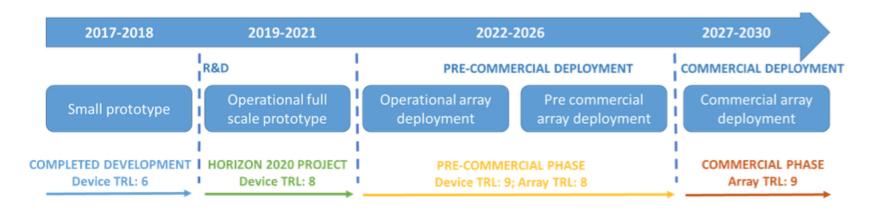


Figure 9: Project stages









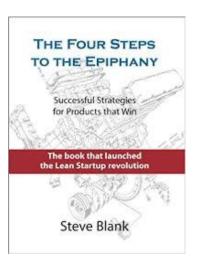
#### **FEASIBILITY**

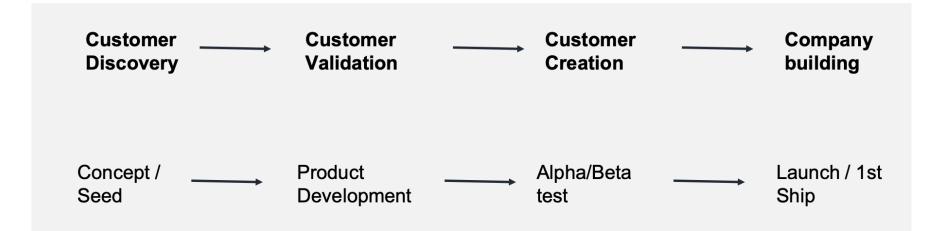
- Technological
- Practical
- Economic

**Product Development Process** 



**Customer Development Process** 





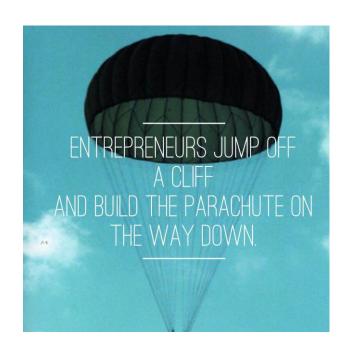






#### **RISKS**

The EIC Accelerator supports high-risk, high-potential small and medium-sized enterprises and innovators to help them develop and bring onto the market new innovative products, services and business models that could drive economic growth.







### **RISKS**

Only brief description

Mitigation measure to be presented in Section 3

EIC projects must be risky!

Description of risk	
Development risks arising from not achieving the set objectives for the LASSI hardware and software solution	
Incomplete understanding of customer use cases which can cause a misfit of the solution to the users' need	
Customer take-up below expectations	







High-risk/high-potential innovation ideas that have something that nobody else has. It should be better and/or significantly different to any alternative. Game-changing ideas or breakthrough innovations are particularly sought after. It's high degree of novelty comes with a high chance of either success or failure.

Realistic description of the current stage of development; at least TRL 6, or something analogous for non-technological innovations and clear outline of steps planned to take this innovation to market.

Highly innovative solution that goes beyond the state of the art in comparison with existing or competing solutions, including on the basis of costs, ease of use and other relevant features as well as issues related to climate change or the environment, the gender dimension and any other benefits for society.





Very good understanding of both risks and opportunities related to successful market introduction of the innovation from both technical and commercial points of view. Documentation on the technological, practical and economic feasibility of the innovation. The 'feasibility' aspect is closely examined if you are invited to present your proposal.

**Objectives for the innovation proposal** as well as the **approach and activities** to be developed are **consistent with the expected impact** (i.e. commercialisation or deployment resulting in **company growth**). Appropriate definition provided of specifications for outcome of project and criteria for success.

Taken as whole, to what extent the 'Excellence' elements are coherent and plausible





















# **Project Writing Camp for SMEs**

Istanbul, 24th January 2020

http://www.turkeyinh2020.eu











Technical Assistance for Turkey in Horizon 2020 Phase-II EuropeAid/139098/IH/SER/TR

# Turkey in Horizon 2020 II

Horizon 2020 SME Instrument (EIC Accelerator) –
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Section 2: Impact

Grigoris Chatzikostas

**Training Coordinator** 

Istanbul, 24/01/2020



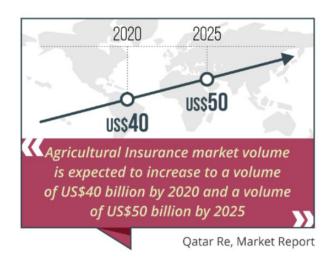


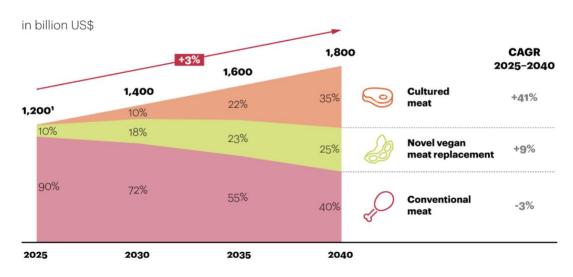


#### **MARKET AND CUSTOMERS**

- Market assessment (inc. conditions and growth rate)
- Potential customers
- Unique Selling Points
- Differentiators













#### **MARKET ASSESSMENT: TAM SAM SOM**

**TAM:** <u>Total</u> <u>A</u>vailable <u>M</u>arket **Focus on:** Total market / size

**Example: Total Agricultural Robotics Market** 

**SAM:** Serviceable Addressable Market Focus on: Your own technology/ services

Example: Total market for spraying robots (Segment of total

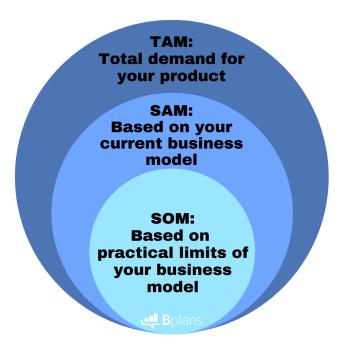
agricultural robotics market)

**SOM: Serviceable Obtainable Market** 

**Focus on:** Which realistic market share can be obtained by myself considering: competition, trends, expected demand/forecast, countries, my sales/distribution channels and other market influences?)

influences?)

Example: My realistic goal to sell spraying robots to farmers.









### **POTENTIAL CUSTOMERS**

#### **MARKET SIZE**

		Numb	er of farm holdi	ngs	Utilised agricultural area in ha		Standard output (EUR)			Livestock units on holdings with livestock			
	Avg Farm Size	All Farms	Very small & Small Farms	Large Farms	All Farms	Very small & Small Farms	Large Farms	All Farms	Very small & Small Farms	Large Farms	All Farms	Very small & Small Farms	Large Farms
Spain	24,1	965.000	758.000	52.000	23.300.000	3.559.000	12.939.000	35.979.000	16.129.000	9.049.000	14.502.000	7.409.000	3.051.000
Ireland	35,5	140.000	60.000	5.000	4.959.000	658.000	1.152.000	5.013.000	652.000	887.000	5.929.000	899.000	795.000
Serbia	4,5	650.000						5.300.000			1.800.000		
France	58,7	472.000	202.000	98.000	27.739.000	1.164.000	17.170.000	56.914.000	10.977.000	24.481.000	21.871.000	2.787.000	9.741.000
Germany	58.6	285.000	128.000	35.000	16.700.000	1.257.000	9.514.000	46.252.000	7.301.000	20.440.000	18.407.000	3.938.000	6.802.000
Italy	12	1.010.000	880.000	15.000	12.099.000	4.171.000	3.259.000	43.794.000	20.066.000	7.608.000	9.374.000	3.340.000	1.991.000
The Netherlands	27,4	67.000	38.000	2.000	1.848.000	255.000	369.000	20.498.000	9.216.000	2.066.000	6.602.000	2.983.000	446.000
EU-28	16	10.841.000	9.353.000	337.000	174.614.000	32.276.000	90.966.000	331.105.000	107.887.000	110.792.000	130.174.000	40.046.000	40.609.000
Note: Very small	and small	farms are def	fined by a utlised	d agricultu	ral area <20 h	na; large farms	are defined b	y a utilized a	gricultural are	a with over 10	00ha		

Figure 5 Market Size Statistics

#### **MARKET SEGMENTATION**

Customer Segment	Solution	Functionality		Pricing Policy
CS-A1: small dairy farms	Stand-alone device & IT Platform	Test Milk Quality Instantly & Remotely	Device € 250	Platform € 100 Yearly Subscription
CS-A2: Medium and large- sized farms	Stand-alone device & IT Platform	Test Milk Quality Instantly & Remotely	Device € 250	Platform € 100 Yearly Subscription
CS-A2: Medium and large- sized farms	Live measurement Unit & IT Platform	Integrate to milking system	Device € 350	Platform € 150 Yearly Subscription
CS-B: Dairy industry	Stand-alone device & IT Platform	Test Milk Quality Instantly & Remotely	Device € 250	Platform € 1.500 Yearly Subscription
CS-C: Milking Systems Industry (AMS)	Live measurement Unit & IT Platform	Integrate to their milking systems and resale	Device € 300	Platform € 100 Yearly Subscription







#### UNIQUE SELLING POINTS AND DIFFERENTIATORS

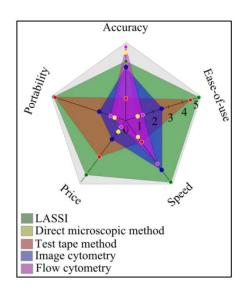
"A unique selling proposition or point (USP) refers to the unique benefit exhibited by a company, service, product or brand that enables it to stand out from competitors. The unique selling proposition must be a feature that highlights product benefits that are meaningful to consumers.

#### Unique value proposition of LASSI:

LASSI combines the advantages of the state-of-the-art solutions into a disruptive innovative solution. **High accuracy** and **high speed** are accomplished by using fluorescent flow cytometry, the fastest and alongside direct microscopy, the most accurate method for determining the SCC. **Ease-of-use** is achieved by automation of the sample preparation and cleaning processes. **Low price** is achieved with innovative design and use of readily available components to create a novel device. Additionally, LASSI handheld SC counter is **portable** due to its small size and it is the first handheld SC counter based on flow cytometry.

Table 4: Overall characteristics of existing solutions

	Accuracy	Ease-of-use	Speed	Price	Portability
Test tape method	Low	Yes	Slow	Low	Yes
California Mastitis Test (CMT)	Low	Yes	Slow	High	Yes
Automatic counting based on image cytometry technology	High	Moderate	Fast	High	Yes
Automatic counting based on flow cytometry technology	High	No	Fast	High	No
LASSI	High	Yes	Fast	Low	Yes









#### **COMMERCIALIZATION STRATEGY**

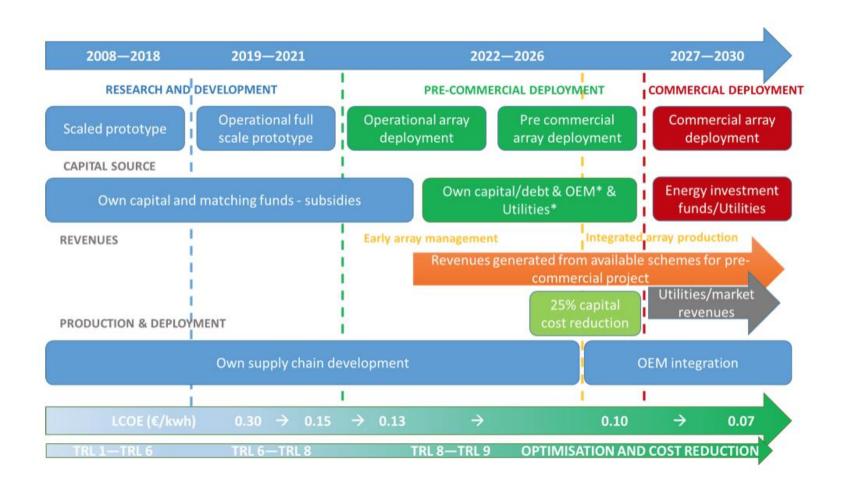
- Strategy for commercialization
- Regulatory approvals/compliance needed
- Time to market/deployment
- Revenue model







#### **COMMERCIALIZATION STRATEGY**



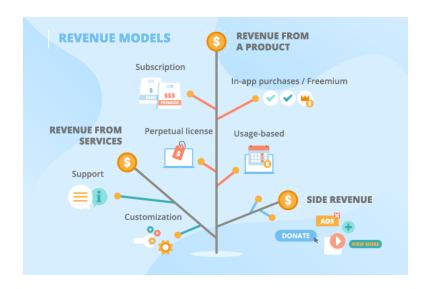






#### **REVENUE MODEL**

A revenue model is a framework for generating revenues. It identifies which **revenue source** to pursue, what **value** to offer, how to **price** the value, and **who pays** for the value.



SALES	Year 1
CS-A1: Small farmers	
P1: Stand Alone Device & IT Platform (Sales)	180.000,00 €
Number of new customers	300
Number of stand alone devices sold	600
Number of IT Platform Subscriptions	300
CS-A2: Medium and large-sized farms	
P1: Stand Alone Device & IT Platform	337.500,00 €
Number of new customers	250
Number of stand alone devices sold	1.250
Number of IT Platform Subscriptions	250

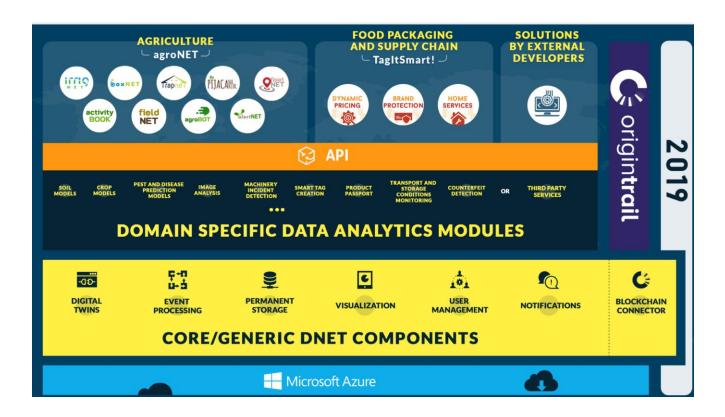






#### **EXTERNAL STRATEGIC PARTNERS**

- Key partners required to develop and commercialise your innovation,
- What their roles/competences are
- To what extent they are already committed and incentivized









#### **LETTERS OF INTENT**

From relevant organizations
Custom (explain their interest in the letter)
Singed by decision makers
Scanned copy in Annex 3



INOSENS.rs

26th February 2018

To Whom It May Concern:

As a Head of Department for insurance in Agriculture at Generali Osiguranje Srbija ADO, I am greatly interested in the activities undertaken by the BEACON project submitted by KARAVIAS, in response to the topic DT-SPACE-01-EO-2018-2020 —"Digitising and transforming European industry and services (DT)" of the Horizon 2020 Programme.

The proposal aims to deliver agricultural insurance services into a commercial service package that will enable insurance companies to alleviate the effect of weather uncertainty when estimating risk for Agricultural Insurance products, reduce the number of on-site visits for claim verification, reduce operational and administrative costs for monitoring of insured indexes and contract handling, and design more accurate and personalised contracts by using Earth Observation data and weather intelligence, matching them with Blockchain technology and Smart Contracts applications.

As we are interested to supplement our services with advanced insurance solutions, BEACON will give us the opportunity to use current, historical and forecast EO and meteorological data, so that we enhance the estimation of the undertaken risks and crop losses and design the premiums with greater accuracy.

For the reasons above I am writing to confirm our interest in collaborating with BEACON, helping to define requirements, test and validate the proposed solution as well as being able to make use of the envisaged solution.



Akcionansko druživo za osiguranje GENERALJ OSIGURANJE SRBIJA, Beograd, Vladimira Popović Matični broj 17198319 PIB 100001175

Društvo pripada Generali grupi upisanoj u Registar osiguravajućih grupa Italije koji vodi IVAS









#### **INTELLECTUAL PROPERTY**

- Specify your Intellectual Property Rights in relation to your innovation.
- What are the key assumptions
- What measures are needed to ensure freedom to operate (e.g. IP, etc.)?

Broader area	Patent	Description			
	US2015253302 (A1)	Based on microflow cytometry and impedance measurement. Static microchannels suffer from clogging and fabrication tolerances. Market potential questionable.			
	US2014139834 (A1)	Approximation based on two-variable equation. Not very precise.			
SCC datastars	CN102819765 (A)	Image cytometry based counter.			
SCC detectors	US2012310541 (A1)	Apparatus for dielectric spectroscopy of milk. Not ideal for determining SSC.			
	CN1789983 (A)	Colorimetric method of detecting somatic cells in liquid phase. Cumbersome sample preparation.			
	US6307362 (B1)	Somatic cell analyser based on detection of sodium ions. Unreliable technique.			
	NZ608803 (A)	A method for discrimination of cells, no device is discussed.			
	NZ580123 (A)	An indirect method, based on detection of oxygen levels in milk.			
Methods for	JP2010230363	A method based on active oxygen detection. Market take-up unlikely.			
detection	WO2010079469 (A1)	Method based on CMT. There are commercially available solutions using this method. Accuracy is not very high.			
	WO2005018414 (A2)	A method based on detection of nucleic acid in milk.			
	US2008057596 (A1)	Colorimetric method of detecting somatic cells, similar to PortaSCC, but in liquid phase.			

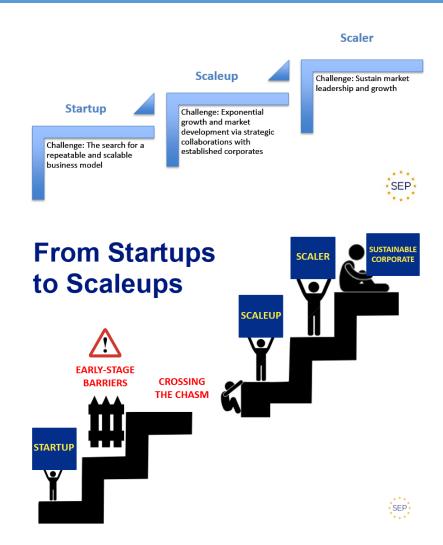




#### **SCALE UP POTENTIAL**

 How you intend to scale up your innovation, including the potential to develop new markets

 What the impact of the innovation on the growth of the company will be.

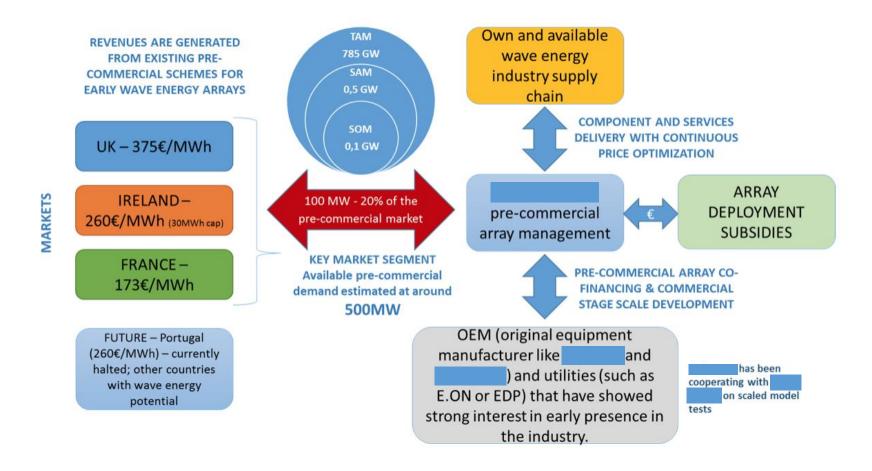








#### **SCALE UP POTENTIAL - NEW MARKETS**









#### **IMPACT ON GROWTH OF THE COMPANY**



	Current Situation	After KATANA
Market Share	<1% of Serbian market	3% of Serbian market 1st marketplace for PA solutions in Europe
Customer base	Private companies: Delta Agrar, Plantaže, Victoria Group and MK Group Public sector organizations: Regional Government of Vojvodina (Dept. Of Agriculture) and the Waters of Vojvodina organization	PA solutions providers from all over Europe (500+ customers)
Local Business Portfolio	4 paying customers, all in Serbia	+10 paying customers in Serbia
International Business Portfolio	None	500 paying customers in Europe
No. of Employees	3	12
Business Activities	ICT Technologies for Agriculture	ICT Technologies for Agriculture
Potential Turnover Increase (%) and (k€)	-	+150% +750k EUR





#### **KEY PERFORMANCE INDICATORS**

KPIs for the expected outcomes and the related success criteria for the innovation (i.e. the technological, practical, economic, market)

Current values and the target values at specified dates (breakeven point, etc.).

Key Performance Indicators (KPIs)	Target values	
Project Success Indicators		
% of outage due to changes (planned unavailability)	<3%	
% of actual uptime	>97%	
AgI Process cycle-time decrease (%)	60%	
BEACON market readiness		
% of automation workflow achieved on AgI company level	90%	
% of automation workflow achieved on AgI supply chain level	80%	







#### **BROADER IMPACT**

- Societal,
- Economic,
- Environmental
- Climate impacts

be if your innovation if successfully commercialised?

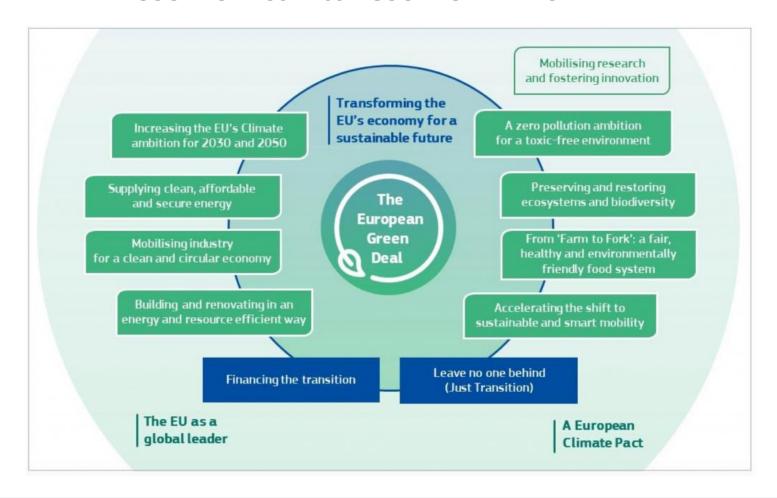
Under this framework MOZART contributes in high priority issues in the EU Environmental Agenda related to agriculture, as reflected in various legislative documents such as the Framework Directive on the Sustainable Use of Pesticides (2009/128/EC), which demands all Member States to adopt National Action Plans setting quantitative objectives, targets, measures and timetables to reduce risks and impacts of pesticide use on human health and the environment. Other relative EU legislative and/or institutional initiatives in the field include Directive (2009/127/EC) with regard to machinery for pesticide application (for the first time, the Directive will also cover certain environmental protection requirements) and of course the Common Agricultural Policy (CAP) and more specifically the cross compliance scheme that couples subsidies to farmers with environmental criteria.





#### **GREEN DEAL**

#### **GOOD FOR BUSINESS = GOOD FOR ENVIRONMENT**









Convincing specification of the potential to create new markets or create market disruption together with a convincing specification of the **substantial demand** (including willingness to pay) for the innovation. The total **market size** envisaged.

Convincing description of targeted users or customers of the innovation, how their needs have been addressed, why the users or customers identified will want to use or buy the product, service or business model, including comparison with what is currently available, if anything at all.

Realistic and relevant analysis of **market conditions** and **growth-rate**, competitors and competitive offerings, key stakeholders, clear identification of opportunities for market introduction, market creation or disruption (e.g. via new value-chains).





A realistic and relevant description of how the innovation has the **potential to scale-up the applicant company**. This should be underpinned by a **convincing business plan** with a clear timeline and complemented, where possible, by a track-record that includes financial data. The 'potential to scale-up' aspect and associated financial needs are closely examined if you are invited to present your proposal

Alignment of proposal with overall strategy of applicant SME and commitment of the team behind them. Demonstration of need for commercial and management experience, including understanding of the financial and organisational requirements for commercial exploitation as well as key third parties needed.

Realistic and relevant **strategic plan for commercialisation**, including approximate time-to-market or deployment. Activities to be undertaken after the project. **The 'commercial strategy' aspect is closely examined if you are invited to present your proposal.** 





The **European/global dimension** of innovation with respect to both commercialisation and assessment of competitors and competitive offerings.

Evidence of or realistic measures to ensure 'freedom to operate' (i.e., possibility of commercial exploitation), convincing knowledge-protection strategy, including current IPR filing status, IPR ownership and licensing issues. Regulatory and/or standards requirements addressed.

Taken as whole, to what extent the 'Impact' elements are coherent and plausible.





















# **Project Writing Camp for SMEs**

Istanbul, 24th January 2020

http://www.turkeyinh2020.eu











Technical Assistance for Turkey in Horizon 2020 Phase-II EuropeAid/139098/IH/SER/TR

# Turkey in Horizon 2020 II

Horizon 2020 SME Instrument (EIC Accelerator) –
Project Writing Camp for SMEs
Section 3: Implementation

Grigoris Chatzikostas

**Training Coordinator** 

Istanbul, 24/01/2020

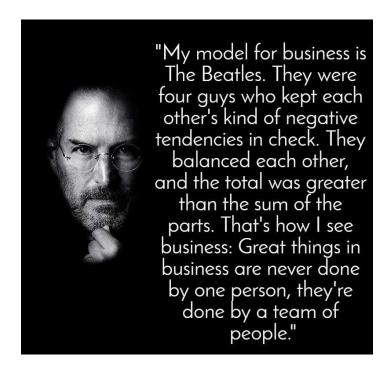






#### **TEAM AND CAPABILITIES**

- Team
- Different roles and commitment
- Achievements/experience (strategic, technical and commercial) in relation to your innovation
- Role of the company's owner(s) if not part of the team.
- Shareholding and stock options of team members (including owners).
- Strengths and weaknesses of the team
- Plans to acquire currently missing competencies
- Incentives for team members









#### **ROLES AND COMMITMENT**

Team Member (Name and Surname)	Position	Department	Function/ key competencies	Commitment (from 1-100% where 100% is full time, i.e. no other commitment outside of the company)
	CEO			?
	СТО			
	COO			
	CMO			
	Other?			

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## Who Wants to Be a Ninja? Job Titles Get a Rebranding

Companies hire for 'data wranglers,' 'growth hackers' in the race for talent







#### **ACHIEVEMENTS AND EXPERIENCE**

Strategic (CEO)
Technical (CTO)
Commercial (CMO)
...In relation to your innovation



**Download Photo** 

Website

Ben Horowitz is a cofounder and general partner at the venture capital firm Andreessen Horowitz. He is the author of the *New York Times* bestsellers, *The Hard Thing About Hard Things* and *What You Do Is Who You Are*. He also created the a16z Cultural Leadership Fund to connect the greatest cultural leaders to the best new technology companies, and enable more young African Americans to enter the technology industry.

Prior to a16z, Ben was cofounder and CEO of Opsware (formerly Loudcloud), which was acquired by Hewlett-Packard for \$1.6 billion in 2007, and was appointed vice president and general manager of Business Technology Optimization for Software at HP. Earlier, he was vice president and general manager of America Online's E-commerce Platform division, where he oversaw development of the company's flagship Shop@AOL service. Previously, Ben ran

several product divisions at Netscape Communications. He also served as vice president of Netscape's widely acclaimed Directory and Security product line. Before joining Netscape in July 1995, he held various senior product marketing positions at Lotus Development Corporation.

Ben has an MS in Computer Science from UCLA and a BA in Computer Science from Columbia University.



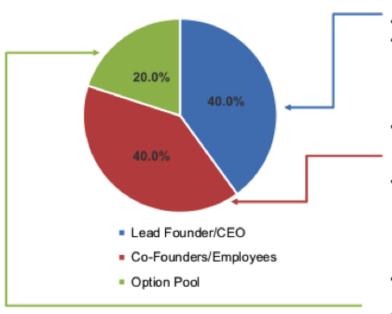




# **SHAREHOLDING**

# INITIAL FOUNDER SPLIT

### Example Initial Cap Table



- Initial CEOs/Lead Founders typically get the largest chunk of ownership
- These Founders are day-to-day
- Initial Equity ranges from 30-60% of the company
- Co-Founders and key employees includes founding scientists, C-level execs, VP, and any initial employee
- Investors will typically like to see an initial team in place before investing in a company
- Initial option pools are set up to incentivize new hires
- A company typically refreshes their option pool at every financing round and targets 15-25%







# STOCK OPTIONS OF TEAM MEMBERS

An employee stock ownership plan (ESOP) is an employee benefit plan that gives workers ownership interest in the company. Startups often use ESOPs as a corporate-finance strategy and to incentivize employees, align their interests with those of their shareholders and compete against large companies in attracting talent.

### TYPICAL PRE-FINANCING EQUITY

Position	Range %
Founding CEO	30-60%
Active Founding Scientist	20-40%
Passive Founding Scientist	1-5%
University Founding Equity	2-20%
Professional CEO (Series ~A/B)	5-10%
C-Level	2-5%
Lead Engineer / Scientist	1-2%
Engineer (5+ years)	0.66-1.25%
Engineer (Junior)	0.2-0.66%
Ind. Board Member/Advisor	1%

- Titles range from CTO, CEO, Chief Scientist
- Many are part time, but spend at least 30% of their time at the startup
- Get 20% median and 25% mean initial equity
- The most highly compensated are founding scientist CEOs, which is rare
- Active Founding Scientist are more typical in tech companies (less common in biotech)
- Titles range from nothing, Advisor, Scientific Advisory Board to Chief Scientist
- Spending very little time day to day at the startup and some are not in touch with their companies at all
- · Get less than 5% initial equity





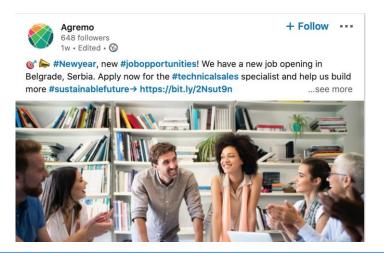


# STRENGTHS, WEAKNESSES AND MISSING COMPETENCIES

# **CREDIBLE AND REALISTIC ASSESMENT**

STRENGHTS	WEAKNESSES
Technical know - how	Lack of sales/ marketing skills
Long-term previous collaboration	Limited contacts in Europe
Commitment	Lack of hierarchy
••••	••••

### **AMBITIOUS PLANS**









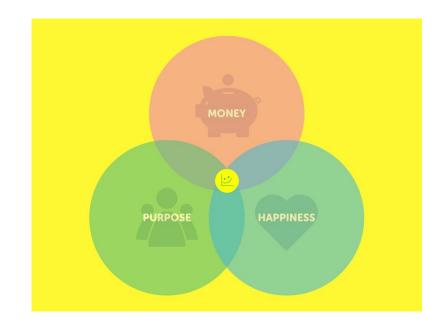
# **INCENTIVES**

### **FINANCIAL INCENTIVES**

- Salaries
- Stock options
- Bonus (based on targets)
- Other?

### **NON-FINANCIAL INCENTIVES**

- Flexible working hours
- Training/travelling
- Team-building activities
- Company car
- Working environment
- Working for a purpose
- Other?







# **FINANCIAL NEEDS**

- Estimation of the total financial resources
- Required timing of financial needs to develop your innovation and to reach the break-even point

### **FINANCIAL TABLES**

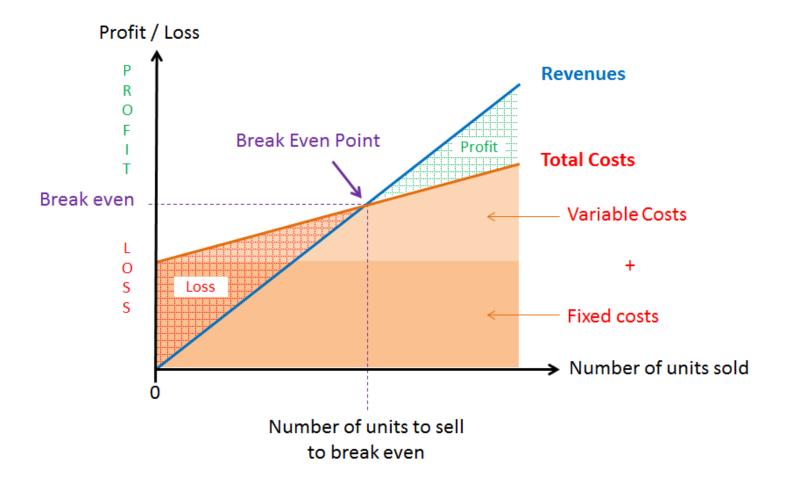
- Simplified financial information on revenues, expenditures, cash flow and balance sheet;
- Company up-to-date financial data relating to cash and debt;
- Summary information about company financial history;
- Company ownership and capital structure (Blended applicants only);
- Information about current financing round.







# **BREAKEVEN POINT**









# SIMPLIFIED FINANCIAL INFORMATION

Table 1 - Simplified financials, k€ - Please fill in with figures for your company. The figures below are illustrative. You may use the formulas provided to accelerate data input

Note. Please pay attention while filling the tables when relevant to use negative values for the formulas to work properly (for example: expenses, taxes, debt etc.).

		Actual (If applicable)				Fore	ecast		
P&L	N-2	N-1	N (explain which year)	N+1	N+2	N+3	N+4	N+5	N+6
Revenues	0	0		0	0		0	(	
Gross Margin	0	0	0	0	0		0		
Selling, General and Administrative expenses	0								
R&D expenses	0								+
Other operational expenses	0								
EBITDA	0								
	0								
Interest Other revenues/expenses (including grants)	0		-						
EBT	0								
Taxes	0		0						
Net Income	0	0	0	0	0		0	(	1
CASHFLOWS	N-2	N-1		N+1	N+2	N+3	N+4	N+5	N+6
Cashflows from operating activities (net)	0	0	0	0	0				
Cashflows from investing activities (net)	0	0	0	0	0		0	(	
Cashflows from financing activities (net)	0	0	0	0	0		0	(	
of which				1					
Proceeds from grants	0	0	0	0	0		0	(	
Proceeds from issuance of debt	1								
Repayment of debt	1 0								+
Proceeds from issuance of equity	0								
Dividends	0			0					
Net increase/decrease in cash and cash equivalent									
Net increase/decrease in cash and cash equivalent	4	-			-	'	, ,	· ·	
BALANCE SHEET	N-2	N-1	N	N+1					
Total assets	0	0	0	0					
of which			4						
Cash and cash equivalents	0			0					
Inventory	0			0					
Accounts receivable	0								
Property and Equipment	0								
Intangible assets	0	0	0	0					
Other assets	0			0					
Outstanding liabilities	0	0	0	0					
of which									
Accounts payable	0	0	0	0					
Short-term debt	0	0	0	0					
Long-term debt	0			0	1				
Other liabilities	0		-		1				
Equity	0								
		CP.							
of which		E 10.47			1				
of which	6 00	_	l n	0					
Share capital	-0								
	0		0	0					







# SIMPLIFIED FINANCIAL INFORMATION

# ... CONTINUED FROM PREVIOUS TABLE

Business metrics and ratios (please do not change )	N-2	N-1	N	N+1	N+2	N+3	N+4	N+5	N+6
Cash and cash equivalents	0	0	0	0	0	0	0	0	
Total debt	0	0	0	0	0	0	0	0	
Total Equity	0	0	0	0	0	0	C	0	(
Gross Margin, %	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
EBITDA Margin, %	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Debt-to-Equity ratio	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	// #DIV/0!	#DIV/0!	#DIV/0!
Return on Equity, %	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Return on Capital Employed, %	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Break-even (operating cashflows)	N	N	N	N	N	N	N	N	N
Cross-check: is the Balance Sheet balanced?	0	0	0	0	0	0	(	) (	





# **UP-TO-DATE FINANCIAL DATA**

Table 2 - Company up-to-date financial data

Information item	Value, k€	Optional comment box
External Debt as of application date		
Total cash balance as of application date		
Cash burn per month (as per last month)		





# **FINANCING HISTORY**

### Table 3 - Company financing history

Please, specify all the previous funding and equity history

Date	Entities providing financing	Public or private	Financing type (e.g. equity, convertible loan, debt, grant)	Amount, k€	Implied valuation, k€ (if relevant)	Comments
			equity			
			convertible loan			
			debt			
			grant			
			other (specify)			
			Total	0		





# OWNERSHIP AND CAPITAL STRUCTURE (ONLY FOR B.F.)

Table 4 - Company ownership and capital structure (Blended applicants only)

Shareholder name	Туре	Optional comment on	Amount of shares fully diluted	Ownership % Fully-	% of voting rights, as of	Forecasted ownership	Forecasted % of
		investor type		Diluted, as of application date	application date	% Fully-Diluted, 12 months from application date	voting rights, 12 months from application date
	founder		0	0	0	0	0
	management team		0	0	0	0	0
	friends and family		0	0	0	0	0
	business angel		0	0	0	0	0
	family office (non- institutional investor)		0	0	0	0	0
	strategic/corporate investor		0	0	0	0	0
	venture capital fund		0	0	0	0	0
	private equity fund	1	0	0	0	0	0
	other institutional investor		0	0	0	0	0
	public investor		0	0	0	0	0
	employees stock option						
	plan		0	0	0	0	0
	other		0	0	0	0	0
		Total	0	0	0	0	0





# **CURRENT FINANCING ROUND**

Table 5 - Current financing round

Information item	Value, k€	Optional comment box
Total financing needed	0	
Grant amount requested		
Equity amount requested (if applicable)		
Other financing - specify		
Suggested post-money valuation		





# **EQUITY (ONLY IF BLENDED FINANCE IS REQUESTED)**

Describe what the requested equity component will be **used for** and how much **equity share** the company plans to **give in return**.

Descibe/comment how **the valuation** of the company has developed over time (e.g. financing rounds) and the rationale behind it - relevant **metrics/milestones achieved** from start to present.

Explain the **company ownership and capital structure** presented in Table 4 of Annex 4. If there are different classes of shares, describe why.

What exit strategy do you expect, including the timeline and expected return on investment? Explain the assumptions.







# **NEED FOR EIC SUPPORT**

 Why it is not possible for your company to raise the required financial resources from private investors or other sources:

Reminder: "Venture capital is too small, fragmented, short term, concentrated on digital, not enough oriented towards deep-tech and lacking critical mass for patient capital. Bank lending, Europe's predominant investment channel and inherently risk averse, is not adept at supporting breakthrough and deep-tech innovation. Public support for innovation — including EU support - is perceived as complex, slow, designed for R&D and fails to bridge the gap to private investment." Use relevant facts and data for Turkey!

 Description of your company's track record and current efforts (to complement the information provided in Table 3 of Annex 4).

Demonstrate that you tried all three above and more. E.g. Corporate investors, other?

What would the impact be if you do not receive financial support from the EIC pilot?

? FOMO







# **RISKS**

Risk Description	WP(s)	Proposed risk-mitigation measures(Initial Contingency Plan)				
Technical Risks						
Not all requirements captured	2	(R): Not all requirements were recorded and analyzed. (M): Regular review and validation of outputs and interaction with stakeholders and expert group.				
LIT-MS mass range	3	(R): Molecular weights of VOCs higher than the mass range that the LIT-MS can detect, which will make it unable to be detected in the open field. (M): Alterations to the electronics to increase the mass range of the instrument.				
LIT-MS sensitivity	3	(R): Field detection encounters low concentration levels require increased sensitivity. (M): Examine different types of inlets to increase sensitivity.				
LIT-MS resolution	3	(R): In on-site measurements there are compounds that interact among them and give close peaks. (M): These components need to be properly distinguished. High resolving power for analyzes of interest is a solution for that risk.				

Description of risk	WP(s) involved	Proposed risk-mitigation measures
Development risks arising from not	WP2	The design of the system and the product specifications will
achieving the set objectives for the LASSI hardware and software solution		be enhanced with the involvement of target users early in the project implementation.
Incomplete understanding of customer use cases which can cause a misfit of the solution to the users' need	WP2	Create a tight feedback loop between the user responses and the technical activities. Run case studies in parallel to the technical activities to allow for continuous assessment of the results.
Customer take-up below expectations	WP4, WP6	Intensify promotional efforts. Interview customers and analyse their experience and reasons for slow take-up. Increase viral distribution incentives.



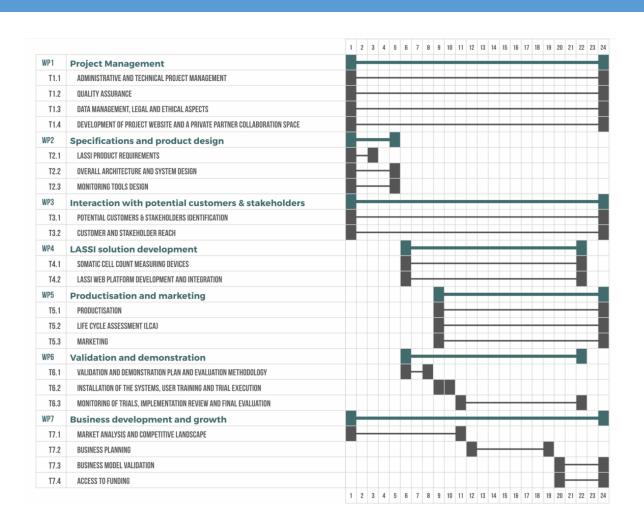




# **APPROACH**

- Overall structure
- Approach
- Timing of work packages and activities

(Based on the objectives and strategy)









# **SUMMARY TABLE**

Work Package (number and title)	Start month	End month	Deliverable (number and title)	Milestone (description and date) – if applicable	Person months	Indicative budget	Grant or Equity

- Including TRL 9 / market deployment activities covered by EU investment in equity up to break-even point
- Not more than 5 Work Packages
- Only essential deliverables (ideally one per Work Package)







# **WORK PACKAGES**

Work Package Number			
Work Package Title			
Start Month		End Month	
Person Months			
Budget			
Indicate if requesting fin equity investment	ancing by grant or		
• •			

**WP description** (You should provide enough detail to justify the proposed resources and also quantified information so that progress can be monitored, including by the Commission):

# **Description of tasks:**

### List of deliverables:

Number	Deliverable name	Туре	Dissemination Level	Delivery date







# **DELIVERABLES**

**Deliverables** are outputs (e.g. information, special report, a technical diagram brochure, list, a software milestone or other building block of the project) that must be produced at a given moment during the action.

### **TYPE**

R: Document, report (excluding the periodic and final reports)

DEM: Demonstrator, pilot, prototype, plan designs

DEC: Websites, patents filing, press & media actions, videos, etc.

OTHER: Software, technical diagram, etc.

### **DISSEMINATION LEVEL**

PU - Public, fully open, e.g. web

CO - Confidential, restricted under conditions set out in Model Grant Agreement

CI - Classified, information as referred to in Commission Decision 2001/844/EC.







# **MILESTONES**

Milestones are control points to help chart your progress. Milestones may correspond to the completion of a key deliverable. They may also correspond to other inputs, allowing the next phase to begin, to decide on further steps or to take corrective measures.



Together with deliverables they help the EC to assess whether a project is on schedule



Identify sufficient
milestones to enable
progress to be
monitored at high level
in all areas of the
project at regular
intervals and explain
your choice



There should be a milestone when a particular stage is complete, or a target has been reached.



There should be milestones in each year of the project, so that annual reviews can be effective







# **RESOURCES**

What are the resources, equipment and facilities required for the project and how you will access them?

HOLISTIC overall budget is 1.024.375 € and the total EU contribution is 717.062,50 €. The breakdown of this budget per WP and cost category is given in the table below.

Table 3.4 a: Breakdown of the project budget

	WP1	WP1	WP3	WP4	Totals
Person months	36,00	55,00	76,00	13,00	180,00
Personnel costs	144.000	220.000	304.000	52.000	720.000
Travel cost	15.000	3.000	3.000	10.000	31.000
Other	34.000	7.000	17.500	10.000	68.500
Other direct costs	49.000	10.000	20.500	20.000	99.500
Indirect costs	48.250	57.500	81.125	18.000	204.875
Total budget	241.250	287.500	405.625	90.000	1.024.375
Requested EC contribution	168.875	201.250	283.938	63.000	717.062,50







# **JUSTIFICATION OF COSTS**

Only if the sum of the costs for' travel', 'equipment' and 'goods and services' exceeds 15% of the personnel costs.

	Cost (€)	Justification
Travel		
Equipment		
Other goods and services		
Total		







# SUBCONTRACTING AND THIRD PARTIES

If you plan to subcontract any tasks:

- Describe and justify the tasks to be subcontracted and the amount.
- Explain the measures to comply with the best value for money principle

Task(s)	Estimated amount	Measures to comply with best value for money (eg. criteria used amount for the selection of the subcontractors)

Subcontracting may be an essential part of the implementation of the project, **but should not be a disproportionate part** of the total estimated eligible costs.

**Linked third party** is an affiliated entity or has a legal link to a participant implying a collaboration not limited to the action.

Contributions in kind provided by third parties: Third parties contributing in kind make available some of their resources to a beneficiary without this being their economic activity (i.e. seconding personnel, contributing equipment, infrastructure or other assets, or other goods and services).







# **ANNEXES**

Annex 1 - Security and Ethics

Annex2 - CVs

Annex 3 - Others

Annex 4 - Financial and corporate information Excel file (provided as

.pdf and .xls/.xlsx/.ods)

Annex 5 - Pitch-deck (provided in .pdf)



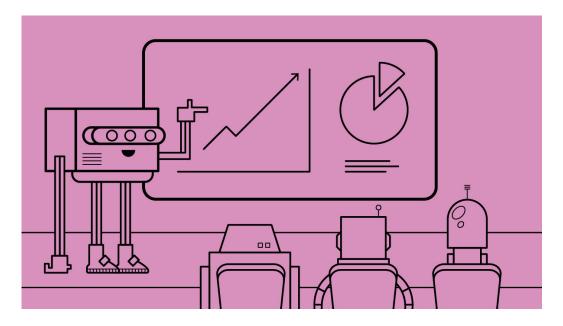




# PITCH DECK

### **Total duration 10 mins:**

Company Purpose
Problem & Solution
Value Proposition
Market Opportunity & Risks
Competition
Business Model
Commercialisation & Marketing
Strategy
Financial Projections Team
Conclusion



After submission for step 1 of the evaluation, the pitch document cannot be changed anymore

One slide for each heading

ONLY applicants whose proposal has passed to step 2 are invited for face-to-face interview in Brussels







# **CRITERIA**

Evidence that the applicant company cannot leverage sufficient investments from the market, particularly for applicant companies requesting blended finance support. Evidence that the applicant company is deemed 'non- bankable' by the market, in view of the activities to be developed. The 'leveraging of investments' and 'bankability' aspects are closely examined if you are invited to present your proposal.

Realistic and relevant analysis of market conditions and growth-rate, competitors and competitive offerings, key stakeholders, clear identification of opportunities for market introduction, market creation or disruption (e.g. via new value-chains).

Realistic and relevant description of how the innovation has the **potential to scale-up the applicant company**. This should be underpinned by a convincing business plan with a clear timeline, and complemented, where possible, by a track-record that includes financial data. *The 'potential to scale-up' aspect and associated financial needs are closely examined if you are invited to present your proposal.* 







# **CRITERIA**

**Technical/business experience of the team**, including management capacity to lead a growing team. If relevant, the proposal includes a plan to acquire missing competences, namely through partnerships and/or subcontracting\* and explains why and how they are selected (subcontractors\* must be selected using 'best value-for-money' principles). **The team aspect is closely examined if you are invited to present your proposal.** 

Availability of resources required (personnel, facilities, networks, etc.) to develop project activities in the most suitable conditions. Where relevant, realistic description of how key stakeholders / partners / subcontractors\* could be involved (subcontractors\* must be selected using 'best value-for-money' principles). Where relevant, the estimated budget and the procedure planned for selecting the subcontractors\* are appropriate.







# **CRITERIA**

Realistic timeframe and comprehensive description of implementation (work-packages, major deliverables and milestones, risk management) taking the company's or applicant's innovation ambitions and objectives into account.

Taken as whole, to what extent the above 'Implementation' elements are coherent and plausible.



















Technical Assistance for Turkey in Horizon 2020 Phase-II
EuropeAid/139098/IH/SER/TR

# Successful Case Studies (review of draft proposals will take place during this session, external to main meeting)











# **Evaluation Form**

https://www.surveymonkey.com/r/PWCSME





