# Horizon 2020

General Introduction & Structure Funding Mechanisms & Partner Search Proposal Preparation & Support

> 7th International Conference on Sustainable Waste Management HERAKLION, 27 June 2019 - Session XII



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**EEWRC** 

# Presentation

# Outline



H2020 "Briefly"...

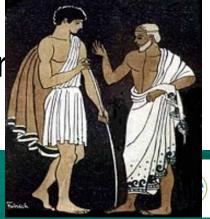
Structure, Programmes, Types of Actions..!

•<u>Consortium...</u> "<u>Mechanic</u> Partner Search overview



•<u>Proposal Support...</u> "<u>Prescreening</u>"... Hints-<u>&-Tips</u>

Cor







proach



**EEWRC** 



# Presenter's Background and Organization

# Professional (past) Experience:

- 2000-2005. Laboratory Researcher (Aegean & Stev
- 2007-2008. Environment Research Officer (Univ. N



→ "Marie Curie" | EURAXESS | "Climate Action & Environment"



# Cyl - EEWR

- EMME-CARE.



- Portfolio, Programme, and Project Management
- Identification of (funding) Opportunities and Network
- Proposal Writing Support
- Mentoring/ Training/ Capacity Building for European Grap
- MSCA-IF/ ERC/ EURAXESS/ Environment/ Space/ Security





The... "EMME-CARE" Project...!

THE CYPRUS INSTITUTE

# **Atmosphere & Climate Division**

7-year project Starting in 2019 > 30M€ Teaming







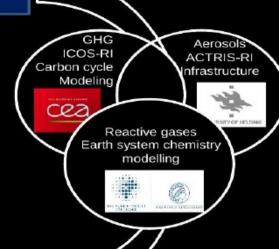


Mediterranean & Middle Eaast

Research Centres

**New Centre of Excellence** 

http://emme-care.cyi.ac.cy/



















# Horizon 2020... briefly: Structure Programmes

**Types of Actions** 

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# H2020... At a Glance...

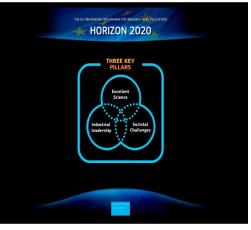
- 1.EU's largest legal instrument for <u>funding</u> <u>research and innovation</u> in Europe (proposed by the Commission and adopted by the Council and Parliament)
- 2.≈ <u>€ 80 billion</u> for the period <u>2014 2020</u>
- 3. Programmes address Societal Challenges
- (Environment, Health, Energy,...), Industrial Leadership and Competitiveness (ICT, Space, Nano,...), as well as Excellence in world leading scientists, future & emergin technologies and training & career development through mobility
- 4. Projects are funded through <u>competitive</u>

  <u>Calls-for-Proposals</u>, stemming from 2-year

  Work Programmes, and must have a

  <u>"European Dimension"</u> and "Impact"













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# "Truths" to...Realize Before Starting..!

- The Proposal is NOT a Paper/ Article for a Journal...
- It is a science-&-innovation pitch of your research...
  - → so as to receive funding...!
- EC has been doing this for quite a few FPs... There are particular policy and mandate backgrounds. There's a particular language-jargon, structure, process...
- The philosophy is "Competitive Calls"













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# "Irutns" to...Realize Before Starting..!

- You need <u>EUROPEAN ADDED VALUE</u>...!
- Problem/ Issue attempted to be solved or the technology/ innovation attempted to be developed cannot be of local or regional character but rather of pan-European... scale/complexity of the "solutions" for EU and not "just X-Country".
- Transnationality, replicability and transferability should be the keywords for both the "challenges"/ "problems" addressed, and the "solutions" proposed.
- not just through "transfer of knowledge" or "networking" or "EU-wide dissemination", but rather it should be clearly shown in the proposal how the issue add "ADDED VALUE" are "wider interest" and how the solution proposition wide applicability.

### 2014 Main Report of DG RTD:





# H2020... "Knowledge-Check" Exercise



# Before... "Glancing"

- In... fruet (B) minutes:
- Let's think quickly together about what you already know of H2020:
  - How many / Which are the H2020 Pillars...
  - How many / Which Programmes per Pillar do you know...
  - How many / Which Types of Actions do you know...



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H2020... At a Glance...

# Pillar 1. Excellent science

# Supporting our excellent science base

## European Research Council (ERC)

Frontier research by the best individual teams



## Future and Emerging Technologies

Collaborative research to open new fields of innovation



### Marie Skłodowska-Curie Actions (MSCA)

Opportunities for training and career development



**Research infrastructures** (including e-infrastructure)

Ensuring access to world-class facilities









H2020... At a Glance...

# Pillar 2. **Industrial leadership**



Leadership in enabling and industrial technologies (LEITs)

(ICT, nanotechnologies, materials, biotechnology, manufacturing, space)



Leveraging private finance and venture capital for research and innovation

### Innovation in SMEs

Fostering all forms of innovation in all types of **SMFs** 















# H2020... At a Glance...

# Pillar 3. Societal challenges





- 1. Health, demographic change and wellbeing
- 2. Food security, sustainable agriculture and forestry, marine and maritime and inland water research, and the bioeconomy
- 3. Secure, clean and efficient energy
- 4. Smart, green and integrated transport
- 5. Climate action, Environment, resource efficiency and raw materials
- 6. Inclusive, innovative and reflective societies
- 7. Secure societies

### Excellence Science

European Research Council

Frontier research by the best individual teams (ERA)

Future and Emerging Technologies

Collaborative research to open new fields of innovation

 Marie Sklodowska Curie Actions

Opportunities for training and carrer development

 Research Infrastructures (Including e-infrastructure) Ensuring access to world-class facilities

### Industrial Leadership

Leadership in enabling and industrial technologies

- ICT
- Nanotechnologies materials, biotechnologies, manifacturing
- Space
- Access to risk finance
   Leveraging private finance and
   venture capital for research and
   innovation
- Innovation in SMEs
   Fostering all forms of innovationin all types of SMEs

### Societal Challange

- Health, demographic change and wellbeing
- Food security, sustainable agriculture, marine and maritime research, and the bio-section
- Secure, clean and efficient energy
- Smart, green and integrated transport
- Climate action, resource efficiency and raw materials
- Europe in a changing world – inclusive, innovative, reflective societies
- Secure Societies

### European Institute of Innovation and Technologies (EIT)

Spreading Excellence and Widening Participation

Science with and for society

Joint Research Center (JRC)

**Euratom** 

Fast Track to Innovation

Source: APRE.it







# Rules...

One project one funding rate

Maximum of 100% of the total eligible costs (except for innovation actions, where a 70% maximum will apply for profit making entities)

Three Evaluation CriteriaExcellenceImpactImplementation

International Cooperation facilitated







Rules...

# **Who Can Participate?**

Basically everybody - but always check Call for Proposals

In Europe and the rest of the world

(legal entities and natural persons)









# Rules...

Who Can Participate and Receive

Funding?
All participants from:

- Member States
- Associated Countries(eg. Iceland, Norway, Israel, Serbia)
- Participants from Third Countries where identified in the Calls for Proposals

High Income Countries are generally not eligible







# Rules...

# **Minimum Conditions**

Standard collaborative actions

At least **three legal entities** each established in a different Member State or an Associated Country;

■SME instrument:

One SME established in a Member State or in an Associated Country.

### **Additional Conditions**

Always check the Work Programme!

√There might be specific conditions for participation







Main Activity Type:

Main Activity Type:

demonstrating etc)

Main Activity Type:

or Support Services

Phase 1:

IPR etc)

Phase 2:

Phase 3:

ERA-NET:

research training

Inducement Prize: Induce future activities

Recognition Prize:

Recognise past achievements

H2020

TYPE OF ACTION

Research and

Innovation Actions

Innovation Actions

Coordination &

SME Instrument

**COFUND Actions** 

Prizes

Support Actions

y	pes	OI	AC	LIO	115	

pes of Actions	
TYPES OF ACTIONS	Source: CY-RPF

MINIMUM

CONDITIONS

≥ 3 legal entities from

3 MS/AC

≥ 3 legal entities from

3 MS/AC

1 legal entity from

MS/AC

1 SME from MS/AC

ERA-NET

≥ 3 legal entities

from MS/AC

PCP & PPI

≥ 3 legal entities

from MS/AC

& 2 ≥ public procurers

from MS/AC

1 legal entity

from MS/AC

1 legal entity

**FUNDING RATE** 

100%

70% - except 100% for

non-profit legal entities

100%

Phase 1

lump sum 50,000 €

Phase 2 70%, except 100% where

the research component

is strongly present

Phase 3

no direct funding

ERA-NET 33%

PCP 70%

PPI 20%

MSCA 50%

n/a

Types	of A	<b>Action</b>	าร

Types	of	Act	ions	

# I THES OF ACTIONS

Types	UI	ACTIONS
		TYPES OF ACTIO

DESCRIPTION OF ACTION

Research & Development (e.g. basic and applied research, technology

Innovation Activities close to the market (e.g. prototyping, testing,

Accompanying Measures, Dissemination, Networking & Coordination

Concept & Feasibility Assesement (e.g., risk assessment, market study,

Innovation Activities (e.g. demonstration, testing, prototyping, piloting etc)

Commercialisation and access to the financial facilities supported under

Implementation of the co-funded joint Call for Proposals to fund

Co-funding new or existing Programmes to open up to, and provide

trans-national research and innovation projects

Public Procurement of Innovative Solutions (PPI):

Pre-Commercial Procurement (PCP):

First buyer for innovative solutions

Steer development to public sector needs

Marie Skłodowska - Curie Actions (MSCA):

development and integration, testing and validation)

<i>.</i>	, , ,		
		ACTIO	

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# "HERAKLION-2019 7th International Conference on Sustainable Waste Management"

Consortium "Mechanics"...











# Consortia...

Partners...





To achieve European Added
 Value...

to achieve Transnationality,
 replicability and

transferability...you

Good PARTNERS anConsortium...!







# Consortia... Partners... in H2020...

# **Good characteristics in**

- · Areptartneliable?
- Are they <u>suitable</u> for the purposes of the Project?
- Is their <u>Organisation</u> able to provide the necessary resources?
- Do they bring <u>added value</u> to the Consortium?
- **Do** they contribute to *gender* balance?













# Consortia... Partners... in H2020...

# **Characteristics of a Good**

- Experienced coordinator
  Consortium
  Consortium
  Consortium
- ✓ Scientists with **track** record
- ✓ Relevant expertise and skills
- ✓ Good infrastructure and resources
- ✓ Involvement of competent staff
- ✓ Partners contributing to "triple helix" and "triple i" dimension

- ✓ Multidisciplinary
- ✓ Partners have
  Complementarity (no major overlaps) and synergies
- ✓ Relevant stakeholders
- ✓ Good distribution of work
- ✓ Added value of each partner
- ✓ Previous collaborations
- **✓** Commitment









# Consortia... Partners... in H2020...

# H2020... "Networking Means" Exercise



- In...three (3) minutes:
- Let's think together...
  - Three (3) Partner Search means and/or approaches you would suggest
  - One (1) that you would not suggest



# Where should I look for "Core"

- Personal contant meths?
   (reliable) people and institutions you have worked with in other scientific/research endeavours
- Previous Collaborations in (EU) Projects
- Contacts from participation in Working Groups / Committees











# **How about additional Good**

- · COST Actions Portners?
- NCP Networks' Partner Search Tools:
- → <a href="http://ec.europa.eu/research/participants/docs/h2020-funeguide/grants/applying-for-funding/find-partners\_en.htm">http://ec.europa.eu/research/participants/docs/h2020-funeguide/grants/applying-for-funding/find-partners\_en.htm</a>
- → ICT, Health, Energy, Environment, Transport\_
- EEN Cooperation Opportunities Databas
- → <a href="http://een.ec.europa.eu/tools/services/SearchCenter/Search">http://een.ec.europa.eu/tools/services/SearchCenter/Search</a> ofileSimpleSearch
- Brokerage Events, Info-days, Seminars, Conferences
- Linked In, ResearchGate.net, Academia.edu, Ang List







H2020...

At a Glance...

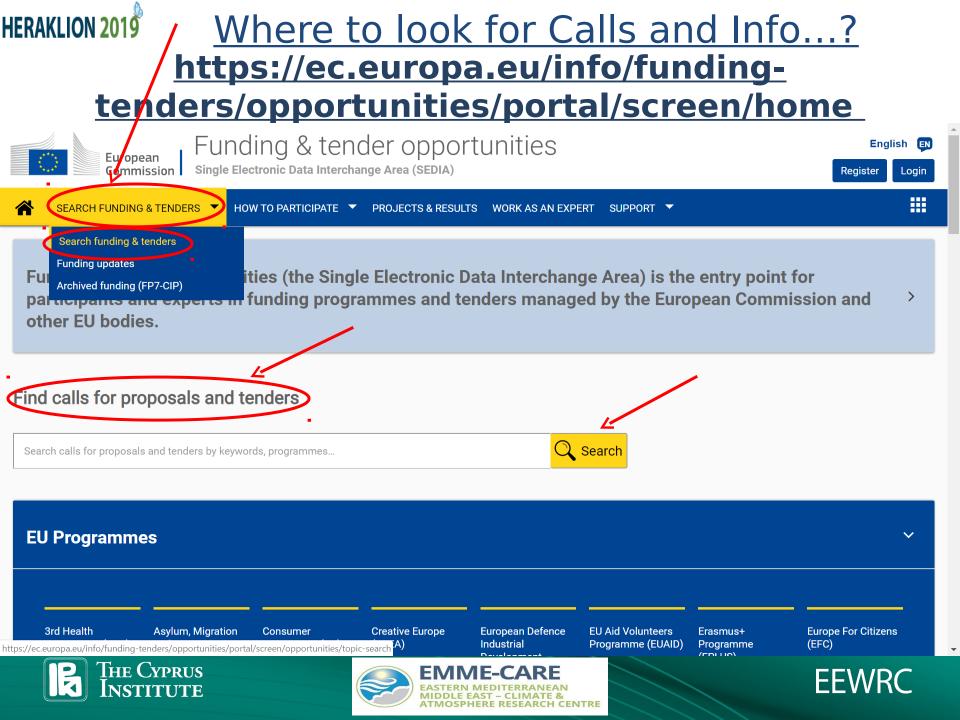


# · Researcher P Wese Atch **Team: Suppose...:** • Environmental Protection...

- Sustainable Use Resources
- Sustainable Development and Management...
- Waste Management...
- Renewable Energy Sources...
- Climate Change (Adaptation and Mitigation)...
- Use of Novel Technologies and Innovations for the Environment...







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# Where to look for Calls and Info...?

But also the... "less obvious"...

Keep an eye at the... obvious...







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Priority 3. Societal Challenges



Tackling societal challenges for a better society

- 1. Health, demographic change and wellbeing
- 2. Food security, sustainable agriculture and forestry, marine and maritime and inland water research, and the bioeconomy
- 3. Secure, clean and efficient energy
- 4. Smart, green and integrated transport
- 5. Climate action, Environment, resource efficiency and raw materials
- 6. Inclusive, innovative and reflective societies
- 7. Secure societies



# http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-20 20/main/h2020-wp1820-climate\_en.pdf



Decarbonisation.



### Climate adaptation, impacts and services.



Connecting economic and environmental gains - the circular economy

Inter-relations between climate change, biodiversity and ecosystem services



Water for our environment, economy and society

Innovating cities for sustainability and resilience.



Protecting and leveraging the value of our natural and cultural assets: Earth observation





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Priority 3. Societal Challenges



Tackling societal challenges for a better society

- 1. Health, demographic change and wellbeing
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http://ec.europa.eu/research/participants/data/ref/h2020/wp/2018-2 020/main/h2020-wp1820-energy\_en.pdf





## Energy efficiency

Global leadership in renewables.

Smart and clean energy for consumers.

Smart citizen-centred energy system.

Enabling near-zero CO2 emissions from fossil fuel power plants and carbon intensive industries







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"Hints"...



Evaluator's

"Eyes"

"Tips"...



Common Errors

H2020

Proposal Writing



Best Practice







# "Official"

# Criteria



# **Excellence**

# **Impact**

# **Implementation**

Weighting and Ex Aequo Priority Check Calls!!!

"Content"

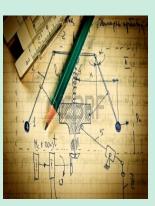
- •Clarity and pertinence of the **objectives**;
- •Credibility of the proposed approach.
- Soundness of the concept;
- Quality of the proposed coordination and/or support measures;
- •Progress beyond the state-of-the-art.

- •The expected impacts listed in the work programme under the relevant topic;
- Enhancing innovation capacity and integration of new knowledge;
- •Strengthening the competitiveness and growth of companies by developing and delivering innovations meeting the needs of European and global markets;
- •Effectiveness of the proposed measures to exploit and disseminate the project results (including management of IPR), to communicate the project, and to manage research data where relevant.

- •Coherence and effectiveness of the **Work Plan**, including appropriateness of the allocation of tasks and resources;
- •Complementarity of the participants within the consortium (when relevant);
- •Appropriateness of the management structures and procedures, including risk and innovation management.









# "Deciphered"

# Criteria

<b>1</b>	

# Excellence

# **Impact**

# Implementation

"Hints..."

**Objectives** and overview Research methodology and approach: highlight the type of research and innovation activities proposed Explain the contribution that the project is expected to make to advancements within the project field. Describe any **novel** concepts,

approaches or

employed.

methods that will be

•Important field of research for Europe

- •High practical value of the project and also results can be applied to larger class of problems (tackling also multidisciplinarity)
- •Comparison of experience in relevant field outside Europe and showing that project will promote European research and excellence and EU competitiveness (also showing potential for new jobs creation)
- •Dissemination, Exploitation and Outreach of the project results IPR, Open Access, Scientific Community but also Wider Public.

Work Packages description
Deliverables (= tangible output:
report, document, technical
diagram, software, etc.)
Milestones (=control/ decision
points that help to chart progress)
Gantt Chart (=Table of Activities
over planned time) and PERT-gram
•Synergies of Partners: each has

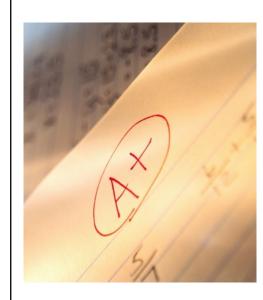
- clear contribution and role

  Progress monitoring and
  management structure, including
  the financial management
  strategy
- •Risk management for Risks that might endanger reaching the project's objectives and the contingency plans to be put in place should risk occur.



# → What Evaluators expect

- Well-organised, "flowing" text. Proposal should make the Evaluator's "life" easier: consistent, well-written, following guidelines/templates.
- Proposal should help the Evaluators score it more easily: "built" around the Evaluation Criteria.
- Proposal has to convince that it will add value in the specific field, for the EU at large.
- Clear description of the contribution to beyond-the-state-of-the-art, as well as of the competencies and synergies of Consortium.









- Evaluators don't have too much time... Keep it simple and concise
- Always revisit the Criteriaquestions... Stay within "Scope" and "Expected Impact"
  - (→ copy from Documentation and work around it)
- No duplications of previous works/projects, but... building on them
- Clear language and organised contents
- Explain abbreviations / Use Glossary
- Use tables and diagrams (relevant and easily understandable)

General

"Good
Practice"













# "Hints"...

# "Tips"...

- Use Margins and Font Size / Page-Numbering / Page Limits set in Templates...!
- Accurate, Verifiable and Professional content (refer. where needed)
- No "emphatic" statements and claims that are unsubstantiated
- Consistent in UK English throughout. NO jargon or slang.
- Write for the "non-specialist" educate te Evaluator to understand what you want to do and why it's worth the funding...!
- No typos, no inconsistencies, no obvious cut-&paste, no numbers which don't add up, no missing pages.

General

"Good
Practic
e"











# "Hints"...

# "Tips"...

# Good to follow the "Logical Framework" approach:

- •WHY a project is carried out
- •WHAT it is expected to achieve (and what not...)
  - → So, Project Objectives (and non-Objectives)
- •WHO is going to do the work...
  - →So, Consortium and the synergies and complementarity of Partners
- •HOW the project is going to achieve the above...
  - →So, Work-Plan and Phases of Work, as well as Means/ Resources to be utilized.













# "Hints"....

# "Tips"...

# Proposal - Writing Basic Hints by Cyl-EEWRC...!

- ✓ Develop end-to-end applications!
- ✓ Showcase and build on trials, and develop/ further enhance any early prototypes...
- ✓ Underline the Innovative, Beyond-the-State-of-Art character of your solution/ project...
- ✓ Provide Public Benefits from your solution/ project...
- ✓ Strengthen the community of relevant developers of technologies!
- ✓ Exploit (if any) mature business concepts...
- ✓ Don't forget **Technology Readiness Level(s)**...!
- √ Take into account relevant standards and regulations (eg. Safety and security)…!











## Technology Readiness Level – TRL

to assess the maturity of evolving technologies during its development.

Basic principles observed and reported System Test, Launch TRL 9 TRL 2: Technology concept and/or application formulated & Operations TRL 3. Analytical and experimental critical function TRL 8 System/Subsystem Development and/or characteristic proof of concept TRL 7 TRL 4: Component and/or breadboard validation in Technology Demonstration laboratory environment TRL 5] Component and/or breadboard validation in TRL 5 Technology relevant environment Development TRL 4 TRL 6: Prototype demonstration in relevant environment Research to Prove Feasibility TRL 3 TRL 7: Prototype demonstration in an operational environment Basic Technology TRL 2 TRL 8: System completed and qualified through test Research and demonstration TRL 1 System proven through successful mission operations







# "Hints" & "Tips" → Overall Useful Links...!

SEDIA

https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home

Helpdesk and Support Services

https://ec.europa.eu/info/fundingtenders/opportunities/portal/screen/support/helpdesks;programCode=H202 0



Horizon 2020 On-line manual

http://ec.europa.eu/research/participants/docs/h2020-fundingguide/index\_en.htm

Annotated Model Grant Agreement (version 6Dec2018) →

http://ec.europa.eu/research/participants/data/ref/h2020/grants\_manual/amga/h2020-amga\_en.pdf

EURAXESS (Charter-&-Code, Policy...)

https://euraxess.ec.europa.eu/

https://euraxess.ec.europa.eu/useful-information/policy-library











# "Hints"... "Tips"...

# Proposal - Writing "General Advice" by Cyl-EEWRC...!

- ✓ Start early... Get Guidance and Info...!
- ✓ Create/Join Consortia on time, based on whom you know/ have worked with or valid suggestions
- ✓ Get your "Policy Background" together → Impact...
- $\checkmark$  Follow the Template-GfA  $\rightarrow$  cover all requested
- ✓ Divide effort over the Evaluation Criteria!
- ✓ When you write...KISS (keep it simple & short)
- √When you image/table...KILL (keep it large & legible)
- ✓ Details! Details!
- ✓ Get your Proposal PRESCREENED... and PROOF-READ...!











# HERAKLION 201 Successful Proposals a

Specific

**Measurable** 

Attainable

Relevant

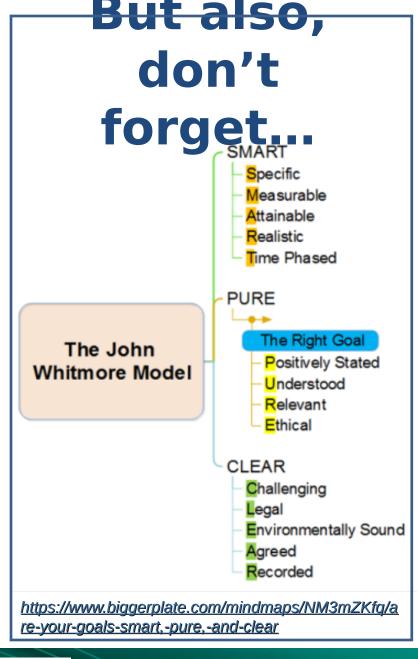
Timely







(Doran, G.T., 1981. Management Review)







ERAKLION 2019 Services..!

# SMART Proposals are...

"Prescreened"....!

• We offer FREE (but not cheap...) guidance to our Team and Collaborators.



- proof-reading ("commas" and "fullstops")
- "Deciphering" of EC-jargon and Addressing of Template's Questions
- Strategy and Text Suggestions





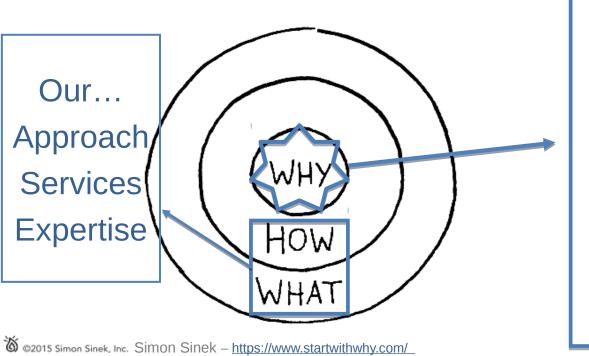




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# The Golden Circle

... our <u>"Why"</u>...



# Our Credo

Inspire...

Motivate...

Empower...

...We believe in holistic and inspirational solutions, of environmental, social and technological consciousness and maturity, motivating scientific research and empowering next generations for the future...







# Thank You ...



Pierantonios Papazoglou ic Coordinator - The Cyprus Institute ergy-Environment-Water Research Centre

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