



Méthodes et structuration des futurs appels à projets du Défi 1 "Health, demographic change and wellbeing "

Horizon 2020

Séminaire d'été
GDR Longévité et vieillissement
25 septembre 2015

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Mission Prospective et recherche
Direction générale de la santé

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Opportunités de financements EU en R&I (Santé)

Sujets ouverts



Commission
Européenne

Sujets ciblés-
marché
Sujets
« sociétaux »



Innovative Medicine
Initiative

Partenariat
public-privé
CE + EFPIA

Dvpt nouvelles
molécules
thérapeutiques



European-Developing
Countries Clinical Trials
Partnership

Partenariat
public-public
*EM + CE +
E.Africains*

Essais cliniques
sur les maladies
infectieuses en
collaboration
NORD-SUD

Programmati
on Conjointe

Joint Programming
Initiative

Consortia
D'Etats-
Membres

Thématisques
Variées/
Standardisatio
n des Agenda
de recherche

ERA-NETs

Appels
transnationaux



Genèse du programme stratégique Horizon 2020 et du programme de travail 2016 – 2017

Horizon 2020: l'unique programme de recherche et d'innovation de l'UE

2007-2013



2014-2020



Le programme de financement H2020

- Pour la période 2014-2020
- Finance des projets interdisciplinaires susceptibles de répondre aux grands défis économiques et sociaux
- Il a comme objectif de couvrir l'ensemble de la chaîne de l'innovation
- Il concentre ses financements sur l'excellence scientifique, la primauté industrielle et les défis sociétaux
- Décision du Conseil européen 20 décembre 2013

Mise en œuvre



Programme stratégique

*Proposition
Commission,
adoption
Parlement et
Conseil*

Commission

Programme de travail

Consultation des Etats

2014

2015

2016

2017

2018

2019

2020

1^{er} programme stratégique

<1^{er} programme de
travail

2^{ème} programme stratégique

>

< 2^{ème} PT

>

3^{ème} programme stratégique

< 3^{ème} PT

> < 4^{ème} PT>

Contexte du défi Santé

- Changement démographique, population vieillissante
- Accroissement du fardeau des maladies non-transmissibles/ « lifestyle »
- Augmentation du coût de la santé & de la pression sur les systèmes de santé
- Augmentation des coûts du développement des médicaments, vaccins, dispositifs médicaux...
- Insuffisance d'évidences sur les avantages et l'efficacité, des approches et pratiques actuelles

- Promouvoir le vieillissement actif et en bonne santé
- Favoriser une approche « tout au long de la vie »
- Réduire les inégalités dans le domaine de la santé
- volonté de « scale-up »
- Soutenir le transfert vers la clinique, soutien aux PME et industrie du secteur
- Utilisation des infrastructures européennes

La décision du 20 décembre 2013

20.12.2013 EN Official Journal of the European Union L 347/965

DECISIONS

COUNCIL DECISION
of 3 December 2013

establishing the specific programme implementing Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020) and repealing Decisions 2006/971/EC, 2006/972/EC, 2006/973/EC, 2006/974/EC and 2006/975/EC

(text with EEA relevance)
(2013/743/EL)

THE COUNCIL OF THE EUROPEAN UNION.

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 182(4) thereof,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinion of the European Parliament,

Having regard to the opinion of the European Economic and Social Committee (¹),

Having regard to the opinion of the Committee of the Regions (²),

Acting in accordance with a special legislative procedure,

Whereas:

(1) In accordance with Article 182(3) of the Treaty on the Functioning of the European Union (TFEU), the Framework Programme for Research and Innovation 2014-2020 ("Horizon 2020"), established by Regulation (EU) No 1291/2013 of the European Parliament and of the Council of 11 December 2013 (³), is to be implemented through a specific programme which determines the specific objectives and rules for their implementation, fixes its duration and provides for the means deemed necessary.

(¹) OJ C 181, 21.6.2012, p. 111.
(²) OJ C 277, 18.9.2012, p. 143.
(³) Regulation (EU) No 1291/2013 of the European Parliament and of the Council of 11 December 2013 establishing Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020) and repealing Decision No 1982/2006/EC (See page 104 of this Official Journal).

(2) The general objective of Horizon 2020 should be pursued through three priorities dedicated to generating excellent science ("Excellent science"), creating industrial leadership ("Industrial leadership") and tackling societal challenges ("Societal challenges"). The general objective should also be pursued through the specific objectives "Spreading excellence and widening participation" and "Science with and for society". Those priorities and specific objectives should be implemented by means of a specific programme setting out one Part for each of the three priorities, one Part for the specific objective "Spreading excellence and widening participation", one Part for the specific objective "Science with and for society" and one Part for the non-nuclear direct actions of the Joint Research Centre (JRC).

(3) All Horizon 2020 priorities and specific objectives should include an international dimension. International cooperation activities should be maintained at least at the level of the Seventh Framework Programme of the European Community for research, technological development and demonstration activities (2007-2013) ("Seventh Framework Programme"), adopted by Decision No 1982/2006/EC of the European Parliament and of the Council (⁴).

(4) While Regulation (EU) No 1291/2013 sets out the general objective of Horizon 2020, the priorities and the broad lines of the specific objectives and activities to be carried out, the specific programme should define the specific objectives and the broad lines of the activities which are specific to each of the Parts. The provisions on implementation set out in Regulation (EU) No 1291/2013 apply fully to the specific programme, including those relating to ethical principles.

(5) Each Part should be complementary to and implemented in a coherent way with the other Parts of the specific programme.

(⁴) Decision No 1982/2006/EC of the European Parliament and of the Council of 15 December 2006 concerning the Seventh Framework Programme of the European Community for research, technological development and demonstration activities (2007-2013) (OJ L 412, 20.12.2006, p. 1).

- Social sciences and humanities will be fully integrated in each of the specific objectives of H2020
- This includes: understanding the determinants of health and optimising the effectiveness of Health care provision

La Décision du 20 décembre 2013

Challenge 1: Health, demographic change and well-being

“It is a societal challenge to adjust to the further demands on health and care sectors due to the ageing population (...) . A better understanding of ageing processes and the prevention of age-related illnesses are the basis for keeping European citizens healthy and active throughout the course of their lives”

1.4.1 Ageing and independent and assisted living

“Multidisciplinary advanced and applied research and innovation with socioeconomic, behavioural, gerontological, digital and other sciences is needed for cost effective user-friendly solutions for active, independent and assisted daily for the ageing population”

Challenge 1: autres lignes

- 1.1.1 Understanding the determinants of health, improving health promotion and disease prevention
- 1.4.2 Individual awareness and improvement and empowerment for self management of health
- 1.5.1 Improving health information and better use of health data
- 1.5.2 Improving scientific tools and methods to support policy making and regulatory needs
- 1.6.1 Promoting integrated care
- 1.6.2 Optimising the efficiency and effectiveness of healthcare provision and reducing inequalities by evidence-based decision making and dissemination of best practice, and innovation technologies and approaches

Traduction du programme stratégique en programme de travail

L'exemple du PT 2016-2017

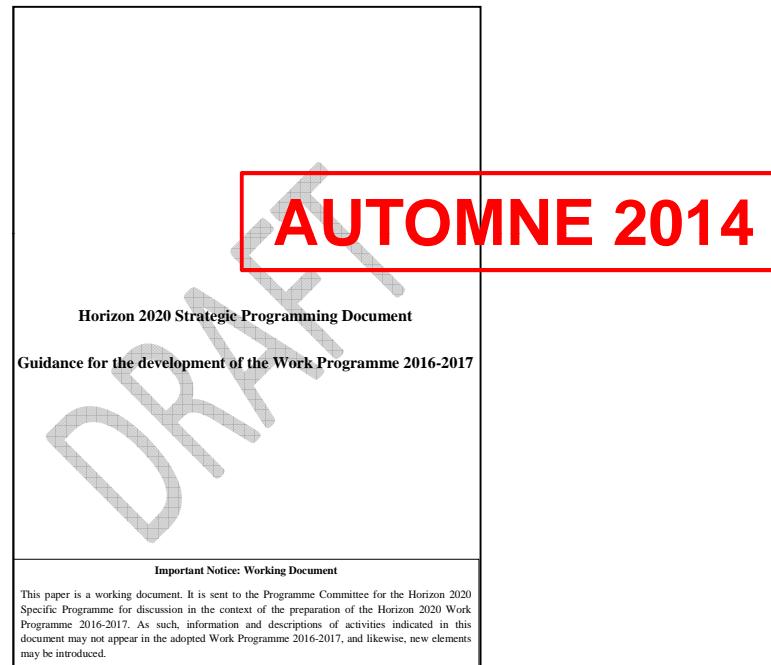
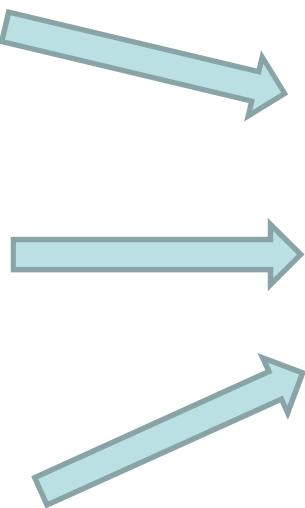


Advisory Group

Consultations publiques, séminaires...

Consultations états membre

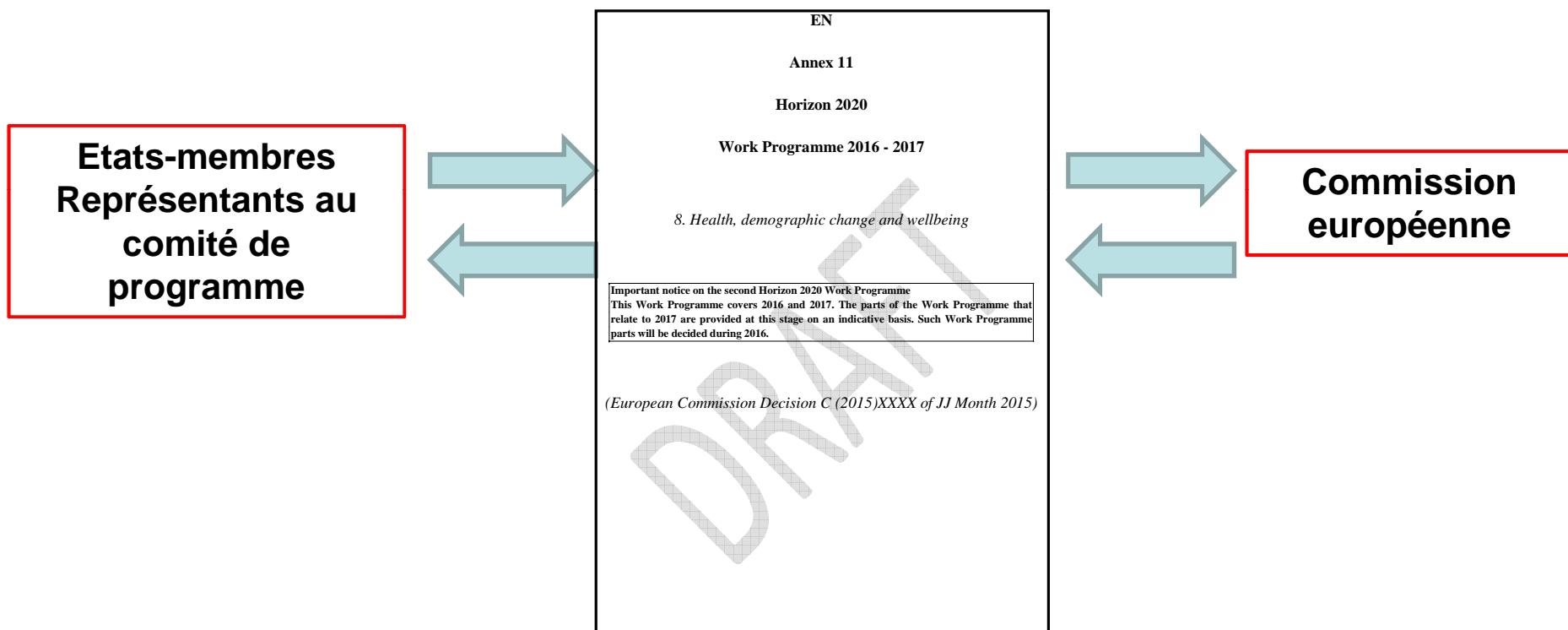
**PRINTEMPS
2014**



**Horizon 2020 Strategic Programming Document
Guidance for the development of the Work Programme
2016-2017**

Traduction du programme stratégique en programme de travail

L'exemple du PT 2016-2017

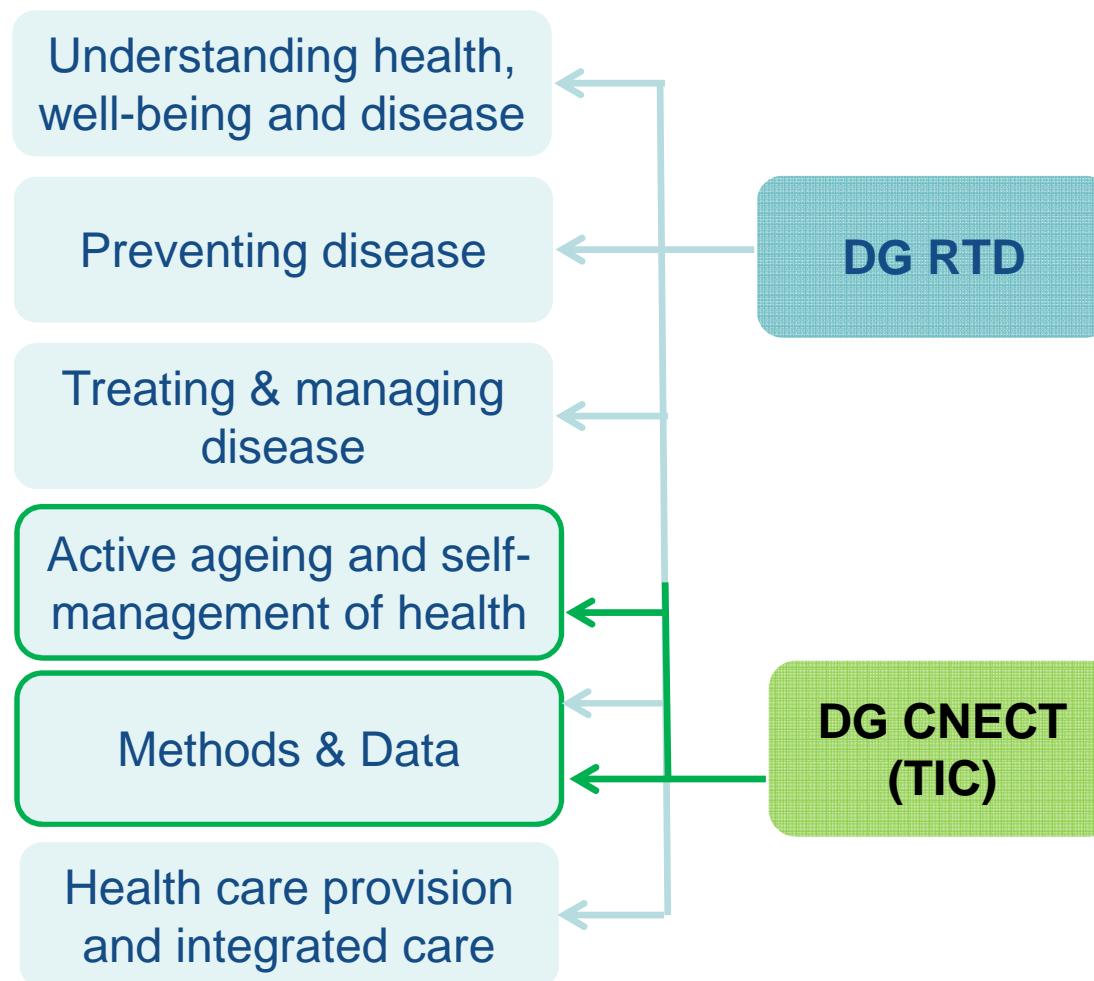




Présentation du Programme de Travail 2016-2017

Défi SANTE – WP 2016-2017

Focus Personalized Medicine (PM)



Understanding health, well-being and disease

			Budg projet	Budget total	Type
PM01	2016	<i>Multi omics for personalised therapies addressing diseases of the immune system</i>	12-15	30	RIA
		Integrate and use high quality genome-epigenome-metabolome-microbiome data from large international initiative with innovative imaging, structural, lifestyle/environmental data + disease oriented analysis>>understanding health&disease - Relevant biomarkers for clinical validation → targeted therapies for complex diseases. - International cooperation			
PM02	2017	<i>New concepts in patient stratification</i>	4-6	40	RIA
		A majority of drugs effective in a limited n. of patients = New concepts for disease based PS for personalised interventions Integrate -omics, modelling, longitudinal data - to be validated in pre-clinical/clinical studies			
PM03	2017	<i>Diagnostic characterisation of rare diseases</i>	10-15	15	RIA
		Apply genomics or other-omics to molecular characterisation of undiagnosed RD. Lien IRDiRC. >>molecular diagnosis of large n. of RD - Genetic variability - Classification of RD: common standards & terminologies , classif. Bioinfo tools (large scale project) Molecular/functional characterization to confirm diagnosis			
PM04	2016	<i>Networking and optimising the use of population and patient cohorts at EU level</i>	8-10	30	RIA
		- Maximize exploitation of Population cohorts . Use ICT, new type of data >> provide knowledge on health disease determinants, course of disease etc - Link with INFRA, international initiatives- facilitate hypothesis-driven research - Support to Health policy			

Preventing disease				Budget projet	Bud total	Type
PM05	2016	<i>The European Human Biomonitoring Initiative</i>		50	50	EJP
PM06	2016	<i>Vaccine development for malaria and/or neglected infectious diseases</i>		3 à 5 15 à 20	40	RIA

preclinical and early clinical development of new vaccine candidates (antigens/adjuvants)

- A) **large platforms >>advances in vaccinology** (e.g. in silico analysis and novel in vitro and in vivo immunoscreens) or new approaches for the discovery and selection of novel, appropriately immunogenic antigens, and/or novel formulations/combinations for the generation of new vaccine candidates.
- B) Include a systematic approach and define key gate-criteria for selection across each step of the research and development pipeline
- C) **SMALLER PROPOSALS = focus on one disease or one vaccine candidate (similar innovative/comprehensive approach).**

PM07	2017	<i>Promoting mental well-being in the young</i>		2-4	20	RIA
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- Population-oriented primary prevention interventions to promote mental well-b. Target group: up to 25 years.
- Build on biological, psychological and social determinant of mental well being such as cultural, work life, lifestyle, epidemiological, economic, environmental
- Aim at increasing resilience and mitigating the impact of risk factors
- Multi-disciplinary approach.
- Includes the young themselves (empowerment) + relevant stakeholders.
- Gender and health inequality aspects

Treating and managing diseases

PM08	2017	<i>New therapies for rare diseases</i>	4-6	60	RIA
		 <ul style="list-style-type: none"> - Support will be provided to clinical trials on substances where orphan designation has been given by the European Commission (at the submission deadline) - from small molecule to gene or cell therapy, may include novel interventions and/or repurposing of existing and known interventions. 			
PM09	2016	<i>New therapies for chronic diseases</i>	4-6	60	RIA
		 <p>clinical trial(s), for chronic non-communicable or chronic infectious diseases >>supporting proof of concept of clinical safety and efficacy in humans of novel therapies (pharmacological as well as non-pharmacological) or the optimisation of available therapies</p>			
PM10	2017	<i>Comparing the effectiveness of existing healthcare interventions in the adult population</i>	4-6	40	RIA
		<p>Compare the use of currently available preventative or therapeutic (pharmacological as well as non-pharmacological) healthcare interventions in adults (elderly not excluded)</p> <ul style="list-style-type: none"> - Address conditions that are : frequent, may lead to co-morbidities, have a high negative impact on the quality of life of the individual, high costs>> make recommandations - Assessment of health and socio-economic outcomes (e.g. quality of life, patient mortality, morbidity, costs, and performance of the health systems) - costs-effectiveness analysis to be done 			
PM11	2016+2017	<i>Clinical research on regenerative medicine</i>	4-6	30	RIA
		 <ul style="list-style-type: none"> - Test NEW regenerative medicine therapies which are ready for clinical (in-patient) research focus on one specific clinical phase of work. 			

ACTIVE AND HEALTHY AGEING

PM12	2016	PCP-eHealth innovation in empowering the patient	4	18	PCP
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PCP (Pre Commercial Procurement) for R&D of new services / integration of existing services
 Increasing the level of interactions between the user and the health professional, enabling users to control their health conditions and adhere to prescribed medical plans.

PM13	2016	PPI for deployment and scaling up of ICT solutions for active and healthy ageing 2-5	9	PPI
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Specify, purchase and deploy ICT-based solutions for active and healthy ageing
 Key document: scaling up road map of the EIP. Co-fund up to 40% of total costs

PM14	2016	EU-JAPAN cooperation on novel ICT Robotics based solutions for active and healthy ageing at home or in care facilities.	2-3	5	RIA
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Developing and demonstrating ICT robotics based solutions for extending active and healthy ageing

- multidisciplinary research (including behaviour/SSH)
- Modularity, cost-effectiveness, reliability, flexibility (=adaptation to needs & lifestyle of older people)
- Safety and acceptability
- Test site in EU and Japan, with sufficient users (for validating)
- Max 36 months, no other third country partner, consortium agreement

PM15	2017	Personalised coaching for well-being and care of people as they age	3-4	26	RIA
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= dvpt of radically new concept for a virtual coach (ex diet, physical activity, risk avoidance, leisure from a physical, mental and cognitive, and social point of view)

- Take into account gender and ethics aspects.
- User-centred. Cost-effectiveness.

Methods and data

PM16	2017	<u>In-silico trials for developing and assessing biomedical products</u>	4-6	19	RIA
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To simulate human physiology and physiopathology at the relevant biological level (ex cell, tissue, organism) and the interaction with the product

To take into account the variability between individuals (genetics, gender, microbiota etc)

To build virtual patients or populations for predicting treatments outcomes >>Personalised medicine

PM17	2016	Increasing digital security of health related data on a systemic level	4-6	11	RIA
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Security related to storage and exchange (including cross-border) of health/personal data protection of personal data and data collected via mobiles

Based on existing projects: DECIPHER, open NCP, EPSOS, STORK.

- Legal & societal aspects (for deployment)
- Respect national regulation regarding data protection + standards
- To be at least tested in 3 EU MS. Anticipate the technological deployment in other countries

PM18	2017	Personalised computer models and in-silico systems for well-being	4-6	19	RIA
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= dvpt of computer models and simulations systems able to aggregate various informations (biochemical, imaging, medical, lifestyle, ...etc) into robust predictors for resilience and recovery

- Multiscale (time and spatial scales) approach; patient-specific
- Multidisciplinary : medicine, SSH and ICT
- Based on existing large database (clinical medicine, biomedical/occupational research, environmental sciences and SSH

Methods and data

PM19	2016	Big Data supporting Public Health policies [CNECT]	3-5	10	RIA
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= Acquisition, management, sharing, modelling, processing and exploiting big data into integrated solutions to support to health policy (decision marking): ex combined effect of environment, lifestyle and genetics on public health

- Big data governance
- Security and privacy issues

PM20	2017	PPI for uptake of standards for the exchange of digitalised healthcare records [CNECT]	8,26	PPI
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EHealth interoperability

PM21	2017	Development of new methods and measures for improved economic evaluation and efficiency measures in the health sector	9	RIA
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To be developed in a future WS

Health care provision and integrated care

PM22	2016	Implementation research for scaling-up of evidence based innovations and good practice	4-6	40	RIA
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- Based on implementation research concept = « scientific study of methods to promote the uptake of research findings ».
- Selected intervention to be scaled up: to make health systems and services more responsive, person-centred, safe, effective and efficient. Large scope (in terms of content + geographical coverage)
- Gender issues & Multidisciplinary research
- Socio-eco-political analysis to be done + organization and business model of the interventions
- Include stakeholders and end-users into the project

Coordination Activities HCO – Health Coordination

- Actions de Coordination et de soutien (CSA):
 - **Médecine personnalisée**
 - Maladies chroniques
 - Soutien aux entreprises/PME en santé (mesures préparatoires, d'accompagnement, notamment TIC/Santé)
- ERA-Net et JPI



<http://www.horizon2020.gouv.fr/pid29768/sante.html>

MINISTÈRE DE
L'ENSEIGNEMENT SUPÉRIEUR
ET DE LA RECHERCHE

LIBERTÉ - ÉGALITÉ - FRATERNITÉ
RÉPUBLIQUE FRANÇAISE

EUROPE

NEWSLETTER ET ALERTES | PRINT | A+ | A- | RSS | TWITTER | WHO WE ARE ?

HORIZON 2020

LE PORTAIL FRANÇAIS DU PROGRAMME EUROPÉEN
POUR LA RECHERCHE ET L'INNOVATION

ESPACE
EUROPEEN DE LA
RECHERCHE | HORIZON 2020 | APPELS EN COURS | COMMENT
PARTICIPER ? | AUTRES
PROGRAMMES | PME

RECHERCHER... | Accueil > Horizon 2020 > Défis sociétaux > Santé

> Recherche avancée multicritères

AGENDA

27 NOV
ERC : session nationale d'information
Horizon 2020
📍 PARIS

27 NOV
Actions Marie Skłodowska-Curie :
session nationale d'information Horizon
2020
📍 PARIS

SANTÉ, DÉMOGRAPHIE, BIEN-ÊTRE

Actualités



28.10.2013
**Réunions d'information
du Point de Contact
National (P.C.N.) santé
en région**

Le P.C.N. santé, en collaboration avec les partenaires locaux, organise une série de réunions d'information en

LE DÉFI SANTÉ

> Présentation

**LE POINT DE
CONTACT
NATIONAL**

> Présentation et contacts

Résumé de l'appel

Draft accessible:

<https://ec.europa.eu/programmes/horizon2020/en/draft-work-programmes-2016-17>

Calendrier:

- Appel 2016:

- Publication (ouverture sur PP): 20 octobre 2015
- Appels en 1 étape surtout, qq 2 étapes
- Dépôts: dates différentes: janvier, février, avril, avril (1ere étape) 2016

- Appel 2017

- Publication le 20 septembre ou le 8 novembre 2016
REVERIFIER!
- Dépôts: janvier, mars, avril 2017

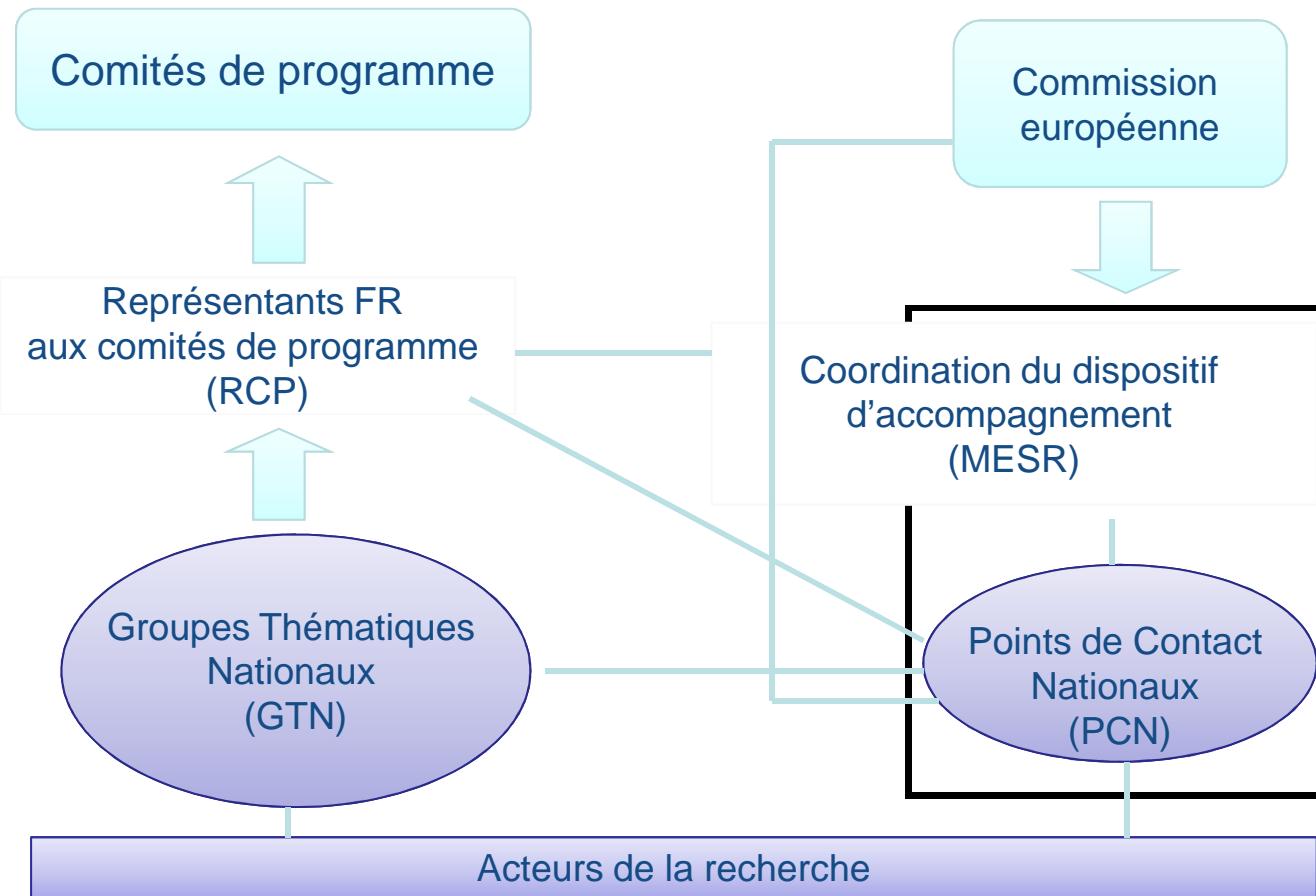
12/02/2016

→ Vérifier dates par ligne dans le WP « conditions for the call »



Prise en compte des remontées et enseignements pour le prochain programme 2018-2019

Le dispositif national d'accompagnement à HORIZON 2020



Le dispositif national d'accompagnement à Horizon 2020

1. Les Représentants français aux comités de programme (RCP) – *action principalement en amont des appels à propositions*
2. Les Groupes Techniques Nationaux (GTN) *action principalement en amont des appels à propositions*
3. Les Points de Contact Nationaux (PCN) *principalement en aval des appels à propositions*

Les représentant-es auprès des comités de programme

L'avis du comité de programme est nécessaire à :

- L'adoption du programme de travail (bi)annuel
- La sélection des projets avant la phase de négociation des contrats.

Le comité de programme est réuni de 4 à 6 fois par an par la Commission :

Pour chaque configuration du comité de programme, la délégation française est composée d'un représentant du MESR et d'un représentant du ministère technique concerné.

Les Groupes Thématiques Nationaux

- Chaque RCP constitue un GTN, structure de consultation des acteurs de la recherche (publique et privée) afin de :
- Préparer les positions défendues par la France en comité de programme ;
- Analyser, en lien avec les PCN, les résultats des appels.
- Membres des GTN : Alliances ; Organismes de recherche / Industriels / CPU & représentation sectorielle académique / Syndicats-fédérations professionnelles / Centres techniques représentatifs / Pôles de compétitivité

Influer en amont sur l'identification des thèmes

- Le travail d'influence au travers des Etats Membres et des Comités de programme est l'une des voies à utiliser
- Ce n'est pas la seule mais il est d'intérêt de la rendre la plus efficace possible
- Un positionnement sur une multitude de priorités est-il « défendable » ?

Méthodologie interne

- Identification d'un nombre limité de priorités
- Définition en accord avec la nouvelle structuration d'Horizon 2020
- Identification en lien avec les priorités stratégiques

Remarques

- Liens étroits avec les RCPs
- Ne pas considérer que c'est trop tôt ! En particulier au niveau des alliances
- Alliance : opportunité de définir des priorités transversales en nombre limité
- Travail sur le WP 2018-2019 commence au printemps 2016!

Format de la consultation initiale

Recommendation / comment	Expected impact on health, wellbeing and ageing including impact on SMEs, growth, and jobs	1) Gaps addressed (science, technology, markets, policy) and/or 2) New opportunities for people, systems and economy including international linkages	How can interdisciplinarity issues be addressed? (E.g. social sciences, humanities and gender aspects in research, cross-cutting with other societal challenges)
1.1.2 Integrative medicine: role of cell and tissue interactions in health and disease	Main challenges are: 1- to proceed from organ-driven research and medicine towards integrative medicine; 2- to bring a new dimension to the study of disease, integrating high throughput phenotyping and multi-level approaches (gene/chromatin/metabolomics) in research; 3- integrate mathematical treatment of large data-sets; 4- to translate this new knowledge into medical care	Outputs will follow at two levels: 1- a new understanding of disease origin and progression; 2- novel therapeutic approaches Gaps: 1- mathematical innovation and advanced methods for data management; 2- integration of system medicine advances into medical practice that is likely to implicate re-organisation of certain aspects of health care It is absolutely necessary that scientists from main industry and SMEs are involved, since this new approach in biology and medicine has to be paralleled with symmetric shift of approach to new research methods, drug development and innovation in patient care	Interactions between biologists, bio-informaticians and mathematicians will be an absolute requirement
1.1.2 Origin of cancer genome mutations	Improve knowledge on cancer occurrence in general population of environmental exposure and improve observation and la survey	Better understanding of the risks to develop a cancer. Benchmark with international cohorts and behavioral way of life	From fundamental research to social challenges in order to ensure a better understanding.
1.1.2 Understand cancer cells in their niche to better fight tumour growth and metastasis	Knowledge in tumour development through the understanding of its microenvironment within 5 years Knowledge in tumour reaction to treatments through the understanding of its microenvironment during therapy within 5 years New biomarkers of cancer stages related to biochemical composition of the tumour niche within 5 years New targets for anti-cancer drug development within 7 years	The gaps are mainly scientific and technological but latest omics' and cell biological approaches allow to alleviate them. Societal impact may be partly immediate such as to characterize the impact of cancer drugs on tumor microenvironment and more long term to optimize/find new treatments 7 The identification of new cancer biomarkers should be of interest to many SMEs and	Gender aspects need to be addressed with the specificity of sex-specific cancers (breast for instance) with the role of sex hormones (particularly estrogens) as part of the tumor niche components.

CONCLUSIONS

- Vieillissement principalement traité dans le défi 1 sous ses aspects « technologiques »
- Certains thèmes peuvent (doivent?) comporter des « Work Packages » à tendance SHS
- Reste un Programme de travail 2018-2019
- Doit être préparé très en amont, via les RCP, mais aussi le réseau
- Interactions avec le défi 6 dans prochain programme de travail (cf présentation suivante)?

Le prix Horizon pour l'Innovation sociale

La Commission européenne a procédé le 16 septembre 2015 à l'ouverture de la [plate-forme de vote en ligne](#) sur le défi sociétal qui fera l'objet du **prix Horizon pour l'innovation sociale**.

Les citoyens sont invités à choisir parmi **cinq challenges** :

- obésité infantile
- vieillissement de la population
- intégration de la population immigrée dans le marché du travail
- les femmes chefs d'entreprise
- citoyens pour une énergie propre

La Commission européenne ouvrira dans un second temps les candidatures pour le prix Horizon pour l'innovation sociale sur la thématique qui aura été **plébiscitée par le public**.

Ce prix, d'une valeur de **2 millions d'euros**, récompensera le candidat qui sera parvenu à relever ce défi précis le plus efficacement possible.

MERCI DE VOTRE ATTENTION!

