



Lecture et décryptage

Financing for energy efficiency investments Smart Finance for Smart Buildings

LC-SC3-B4E-11-2020

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Quelques rappels...





L'énergie dans Horizon 2020

Excellence scientifique

ERC (13,1 Mds€)

Actions Marie Sklodowska-Curie (6,2 Mds€)

> FET (2,7 Mds€)

Infrastructures (2,5 Mds€)

24,4 Mds€

Primauté industrielle

TIC (7,6 Mds€)

NMP + Biotechs (4,3 Mds€)

> Espace (1,7 Mds€)

Accès au financement à risque (2.8 Mds€)

> Innovation PME (0,6 Md€)

> > 17 Mds€

Défis sociétaux

Santé, bien être et vieillissement (7,5 Mds€)

Sécurité alimentaire, bioéconomie (3,9 Mds€)

Energies sûres, propres, efficaces (5,9 Mds€)

Transport intel., verts, intégrés (6,3 Mds€)

Climat, env., matières premières (3,1 Mds€)

Sociétés inclusives et novatrices (1,3 Md€)

Sociétés sûres (1,7 Md€)

29,7Mds€

Institut européen d'innovation et de technologie (EIT)

Centre de recherche commun (JRC)

Diffusion de l'excellence et élargissement / Science





ENR (PV, Wind...)

Réseau

Stockage

Biocarburants Market-uptake

Euratom





Défi sociétal n°3 = Energie

	2019	2020
Energy Efficiency = EE/B4E	113 M€	86,5 M€
Renewable energy solutions = RES	216 M€	248 M€
Energy Consumer & Energy system = EC & ES	125,65M€	155 M€
Smart Cities and Communities = SCC	83 M€	75 M€
Nearly-zero CO2 emissions from fossil fuels = NZE	53 M€	29 M€
Joint actions among countries = JA	21 M€	15 M€
Cross-cutting issues	12 M€	15 M€
	623,65M€	623,5M€
Pour mémoire : budget 2018 = 537,3M€		

Les différents types d'appels à projets

Recherche & Innovation (RIA)

TRL 2 à 5

- activités visant à établir de nouvelles connaissances, à travers des recherches fondamentales ou appliquées
- peuvent inclure du développement et de l'intégration de technologies, des essais et la validation d'un prototype à petite échelle

Taux de financement 100%

Innovation (IA)

TRL 5 à 8

- activités visant directement à produire des plans, arrangements ou concepts pour un produit, procédé ou service nouveau ou amélioré : prototypage, démonstration ou pilotes, validation du produit à grande échelle, première commercialisation
- peuvent inclure des activités limitées de recherche et de développement

Taux de financement 70% pour le privé (100% public)

Coordination & Support (CSA)

 Activités visant à améliorer les savoir-faire ou mobilisant des budgets considérables ou facilitant la mise en œuvre des politiques de l'Union

Taux de financement 100%







Taux de financement

Taux de financement des coûts directs éligibles				
	Entités à but non lucratif	Entreprises		
RIA	100%	100%		
IA	100%	70%		
CSA	100%	100%		



Couts indirects: forfaitairement **25%** des coûts directs pour tous les partenaires (hors sous-traitance et contributions en nature)

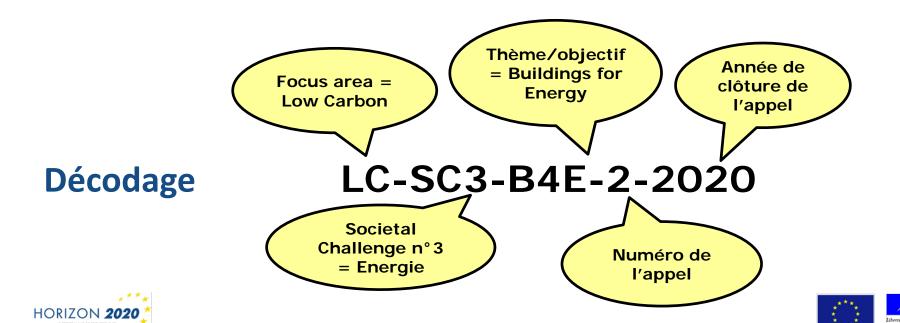






Les grandes priorités pour 2020

- Building a low-carbon, climate resilient future = LC
- 2. Digitising and transforming European industry and services = **DT**
- Connecting economic and environmental gains the Circular Economy = CE
- 4. Boosting the effectiveness of the Security Union = **SU**



Lire un appel à projet

Réf. du sujet Et réf. de l'appel

LCE-12-2017: Near-to-market solutions for the use of solar heat in industrial processes

Défi à relever

<u>Specific Challenge</u>: The potential for the use of solar heat for industrial purposes is still largely untapped. The challenge is to reduce the technical complexity and develop cost effective solutions.

<u>Scope</u>: Proposals shall demonstrate less complex and cost effective technical solutions which significantly increase the share of solar heat in industrial processes and which can be easily integrated into existing industrial plants.

TRL 7 shall be achieved at the end of project activities (please see part G of the General

Indication des TRLs

Périmètre

Opening the project's test sites, pilot and demonstration facilities, or research infrastructures for practice oriented education, training or knowledge exchange is encouraged.

The Commission considers that proposals requesting a contribution from the EU of between EUR 5 to 8 million would allow this proif and allow it be addressed appropriate. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts

<u>Expected Impact</u>: The action will result in solutions which demonstrate that solar heat can be a reliable energy source for industrial processes, therefore bringing significant prospects for the market uptake of this renewable energy source and for the decarbonisation of industrial processes.

Type of Action: Innovation action

Indication du montant de subvention disponible par projet

Type of action = Schémas de financement

Type of Action

+ informations sur le budget disponible

+ la date limite pour soumettre une proposition



Impact

attendu





Évaluation



- La Commission fournit aux évaluateurs son interprétation de l'appel considéré.
- Aucune discussion/négociation avec les évaluateur et/ou la Commission n'est possible. Le dossier n'est pas modifiable après le dépôt final.
- L'évaluateur évalue le dossier sur la base de ce qu'il contient et rien de plus.
- La Commission attend de l'évaluateur qu'il passe 3/4 heures à lire le dossier et à écrire son rapport.









Lecture et décryptage





Archéologie des appels à projets



- <u>EE9: Innovative financing for energy efficiency investments</u>
 develop or replicate innovative financing schemes for energy
 efficiency investments
- <u>EE10: Mainstreaming energy efficiency finance</u> support mainstreaming of energy efficiency finance





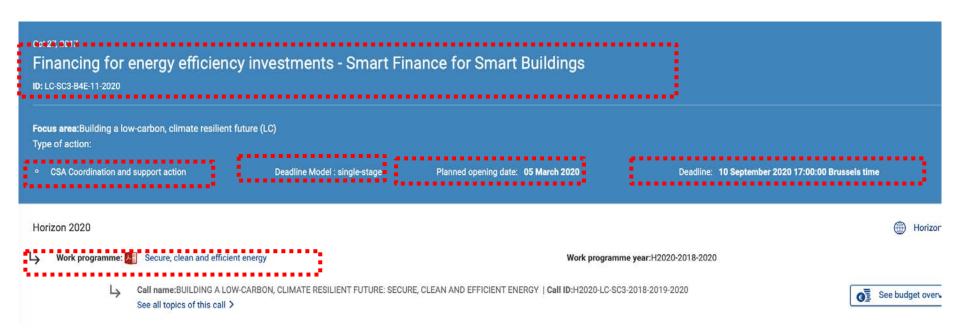
Quelques projets précurseurs



- Financing Energy Efficiency using Private Investments
- <u>Financing scheme for Energy Efficiency and Renewable energy</u>
 <u>Guaranteed in Deep renovations of building stock</u>
- Enhancing at an Early Stage the Investment Value Chain of Energy Efficiency Projects
- Residential Building Energy Renovations with On-Bill Financing
- LAUNCH: sustainable energy assets as tradable securities
- Quality Management Investments for Energy Efficiency
- ...







https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/lc-sc3-b4e-11-2020









Challenge

- Energy efficiency is not yet considered as an attractive investment by the financial sector.
- Lack of statistical data on the actual energy and costs savings achieved by energy efficiency investment projects
- Technical and legal standardisation is highly needed at all steps of the investment value chain
- Non-energy benefits play a key role in the decision to invest in energy.
 efficiency: these benefits need to be quantified and monetized
- There is a need to set up innovative financing schemes at regional or national level.
- The <u>Smart Finance for Smart Buildings initiative</u> needs to be rolled out and shared with all stakeholders at the <u>national level</u>.







Scope

a) Mainstreaming energy efficiency finance

- Development, demonstration and promotion of frameworks for the standardisation, aggregation and benchmarking of sustainable energy investments, eg labelling schemes, project rating methodologies and risk assessment tools, standardised legal and financial structures of assets.
- 2. Capacity building for banks and investors
- 3. Gathering, processing and disclosing large-scale data on actual financial performance of energy efficiency investments
- 4. Integration of non-energy benefits in project valuation
- 5. Targeting institutional investors (e.g. public pension schemes)
- 6. Exploring the impact of revised risk ratings and requirements for energy efficiency on **financial regulations** (Basel III, Solvency II).







Scope

b) Innovative financing schemes for energy efficiency investments

- 1. Establishment of new innovative, operational financing schemes;
- 2. Replication of previously successful solutions e.g. developed and implemented under various project development assistance (PDA) facilities under the Horizon 2020 and Intelligent Energy Europe programmes (including MLEI PDA or ELENA);
- 3. Establishment of regional/national aggregators which are able to develop large (standardized) project pipelines.

<u>ELENA</u> fournit une assistance technique pour les investissements en faveur de l'efficacité énergétique et des énergies renouvelables dans le bâti et les transports urbains innovants.

PDA: MLEI-PDA, EIB-ELENA, KfW-ELENA, CEB-ELENA, EEE-F (European Energy Efficiency)







Expected impact

a) Mainstreaming energy efficiency finance

- Number of financial institutions and other stakeholders reached as well as their potential volume of investment concerned;
- 2. Frameworks, standardisation, benchmarking, standardised descriptions and data evidence of financial returns of energy efficiency investments agreed and accepted by the market;
- 3. Higher allocation of institutional investments to energy efficiency; standardisation of assets enabling securitisation; development of a secondary market for energy efficiency assets (in M€ of investment within 5 years after the end of the project);
- 4. Investments in sustainable energy triggered by the project (M€);
- 5. Primary energy savings triggered by the project (in GWh/year);







Expected impact

b) Innovative financing schemes for energy efficiency investments

- 1. Delivery of innovative financing schemes that are **operational and ready** to finance energy efficiency investments;
- Regional/national aggregators with demonstrated/traceable capacity to set up a large-scale pipeline of (standardized) sustainable energy investments (in terms of number of and/or amount of investment);
- 3. Investments in sustainable energy triggered by the project (M€);
- 4. Primary energy savings triggered by the project (in GWh/year).
- 5. Additional **positive effects can be quantified** and reported when relevant and wherever possible:
- 6. Reduction of the greenhouse gases emissions (in tCO2-eq/year) and/or air pollutants (in kg/year) triggered by the project.







Quelques recommandations





Répondre à un appel à projets



Comprendre l'appel à projets

- 1. Lire en détail l'appel à projets et les éléments de son contexte (Programme de travail).
- 2. Assister à la <u>journée d'information</u> organisée par la Commission (*Infoday*) (souvent disponible sous forme vidéo après la présentation).

Rédiger un excellent dossier

- Rédiger un <u>papier de cadrage</u> permet de constituer un <u>noyau de consortium</u> (*lean and mean*) ou de rejoindre un consortium en cours de formation (cf. planches suivantes);
- Si l'on coordonne, étoffer le consortium avec parcimonie;
- Mettre en place un <u>retro-planning réaliste</u>;
- Deux semaines avant le dépôt, faire relire sur le <u>fond</u> (par un « expert » non impliqué dans le projet) et sur la <u>forme</u> (si possible par un anglophone natif);
- Télécharger le dossier en l'état <u>la veille de la date limite</u> et le jour même à midi.







Trouver/compléter un consortium (1)

- Consulter le site Webgate.ec.europa.eu pour voir quelles ont été les propositions gagnantes en réponse à des appels voisins de celui auquel je souhaite postuler : https://webgate.ec.europa.eu/dashboard/sense/app/93297 a69-09fd-4ef5-889f-b83c4e21d33e (H2020 projects);
- puis aller sur le site Cordis pour les details sur le consortium





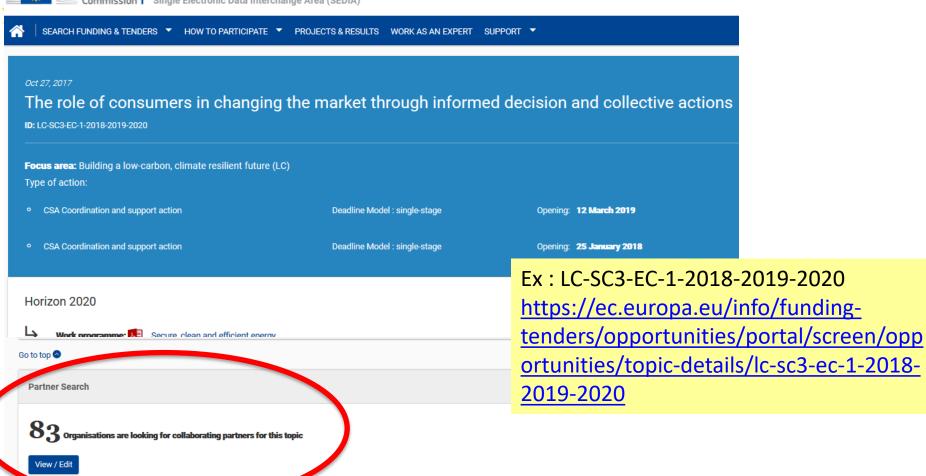


🔭 💆 Trouver/compléter un consortium (2)



Funding & tender opportunities

Single Electronic Data Interchange Area (SEDIA)



quests for open and forthcoming topics after logging into this Portal.



nt Administrators or self-registrants can publish parts





Trouver/compléter un consortium (3)





http://c-energy2020.eu/









Trouver/compléter un consortium (4)



RECHERCHER...

Accueil > Horizon 2020 > Défis sociétaux > Energie

> Recherche avancée multicritères

AGENDA

09 JUIN

Rencontre lauréats-candidats FET Proactive

PARIS

15 JUIN

Journée nationale d'information "Les PME dans Horizon 2020"

PARIS

Recherches de partenaires et offres de compétences en énergie

ENERGIE



Le P.C.N. énergie propose la consulation des recherches de partenaires et des offres de compétences pour les prochains appels du défi 3, grâce à sa collaboration avec ses homologues européens.

http://www.horizon2020.gouv.fr/cid77777/recherchespartenaires-offres-competences-energie.html



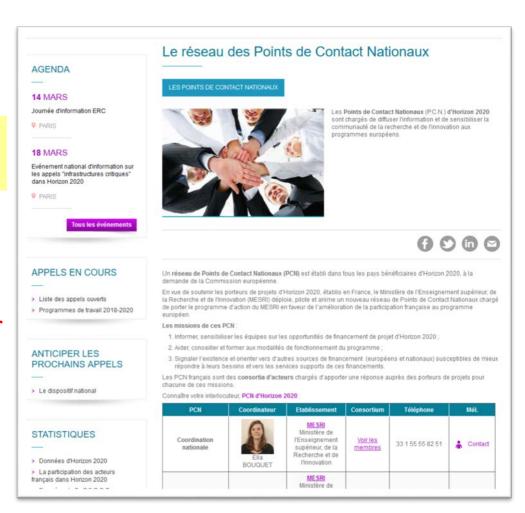


Pour vous aider : les Points de contact nationaux (PCN)



http://www.horizon2020.gouv.fr/cid74103/le-reseau-des-pcn.html

<u>Pour nous contacter</u>: pcn-energie@recherche.gouv.fr









Annexe 1







Specific Challenge:

Energy efficiency is not yet considered as an attractive investment by the financial sector which limits the possibility to use external private finance on top of equity of project owners and available public funding. The lack of statistical data on the actual energy and costs savings achieved by energy efficiency investment projects, as well as on payment default rates, results in financial institutions attributing high risk premiums to energy efficiency investments.

Energy efficiency represents high transaction costs for rather small investments, which is not financially very attractive. Technical and legal standardisation is highly needed at all steps of the investment value chain in order to simplify transactions and increase the confidence of financial institutions. The lack of standardisation of projects also prevents securitisation of energy efficiency assets (loans or equity) so that financial institutions are not able to refinance their debt on the capital markets[1].

Whereas energy efficiency investments are usually expected to be paid back exclusively through the reduction of the energy bill, there is increasing evidence that non-energy benefits play a key role in the decision to invest in energy efficiency. This includes for instance increased building value, lower tenant turnover or vacancy rates etc. These benefits need to be quantified through data collection and monetised in order to evolve the parameters used by financiers to assess an energy efficiency investment.

Moreover, there is a need to set up innovative financing schemes at regional or national level in order to create the conditions for adequate supply of private finance for energy efficiency investments. Innovative financing schemes for energy efficiency aim to progressively maximise the leverage ratio of public funds to private finance. This is in line with the Smart Finance for Smart Buildings initiative that aims at using public funds more effectively.

Access to private finance for energy efficiency and integrated renewables remains challenging. One obstacle is the lack of common understanding of the topic between government, public sector, private sector, and the financial sector. The Smart Finance for Smart Buildings initiative[2] has proposed a comprehensive approach based on the more effective use of public funds, aggregation and project development assistance, and de-risking. However, this approach still needs to be rolled out and shared with all stakeholders at the national level. The Commission is piloting this through the Sustainable Energy Investment Forums initiative since 2016.







Scope:

a) Mainstreaming energy efficiency finance

Proposals should address at least one of the following issues:

- Development, demonstration and promotion of frameworks for the standardisation, aggregation and benchmarking of sustainable energy
 investments. This could include for example, but not exclusively, labelling schemes, project rating methodologies and risk assessment tools,
 standardised legal and financial structures of assets (loans, guarantees, energy performance contracts etc.) in order to develop
 securitisation for energy efficiency based financial products. Proposals integrated in a broader approach such as socially responsible
 investment should focus on the energy component;
- Capacity building for banks and investors at the national and local level, in particular on underwriting sustainable energy investments;
- Gathering, processing and disclosing large-scale data on actual financial performance of energy efficiency investments, in order to create a track record for energy efficiency in different sectors (buildings, industry, transport, etc.). Proposals should build upon or complement the work of the Energy Efficiency Financial Institutions Group (EEFIG) e.g. the De-risking Energy Efficiency Platform[3] and the Commission's Action Plan on Financing Sustainable Growth (COM (2018) 097 final)[4] and its follow-up initiatives.
- Further integration of non-energy benefits in project valuation, in particular in the building sector, leading to evolution of existing financial products or creation of new targeted products;
- Targeting institutional investors (e.g. public pension schemes) in order to increase the share of their funds invested in energy efficiency, or to develop specific funds or investment products. Supporting the integration of energy efficiency in portfolio management strategies for institutional investors and/or fund managers, including through re-definition of fiduciary duties;
- Exploring the impact of revised risk ratings and requirements for energy efficiency on financial regulations (Basel III, Solvency II).
- b) Innovative financing schemes for energy efficiency investments

Proposals should address the development or replication and implementation of innovative financing schemes for energy efficiency investments. They can involve different types of organisations, ownership structures and financing models. These schemes should address the provision of finance as well as the structuring of demand, in particular at regional/national level, and target specific areas (e.g. energy-intensive industries, buildings etc.).







In this context, proposals should address one or more of the following points:

- Establishment of new innovative, operational financing schemes;
- Replication of previously successful solutions e.g. developed and implemented under various project development assistance (PDA)
 facilities under the Horizon 2020 and Intelligent Energy Europe programmes (including MLEI PDA or ELENA);
- Establishment of regional/national aggregators which are able to develop large (standardized) project pipelines;

Overall, proposals should justify how the proposed financing schemes complement already available funding and how they are tailored and innovative for the targeted regions and market segments; as well as clearly demonstrate the market potential, as well as business case and financial viability of the scheme (including investment sizes targeted, expected savings, transaction and management costs, expected returns etc.). In any case, proposals should include a clear action plan to communicate across Europe towards potential replicators.

The Commission considers that proposals requesting a contribution from the EU of between EUR 1 million and 1.5 million would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.







Expected Impact:

Proposals are expected to demonstrate, depending on the scope addressed, the impacts listed below, using quantified indicators and targets wherever possible:

- a) Mainstreaming energy efficiency finance
- Number of financial institutions and other stakeholders reached as well as their potential volume of investment concerned;
- Frameworks, standardisation, benchmarking, standardised descriptions and data evidence of financial returns of energy efficiency investments agreed and accepted by the market;
- Higher allocation of institutional investments to energy efficiency; standardisation of assets enabling securitisation; development of a secondary market for energy efficiency assets (in million Euro of investment within 5 years after the end of the project);
- Investments in sustainable energy triggered by the project (million Euro).
- Primary energy savings triggered by the project (in GWh/year);
- b) Innovative financing schemes for energy efficiency investments
- Delivery of innovative financing schemes that are operational and ready to finance energy efficiency investments;
- Regional/national aggregators with demonstrated/traceable capacity to set up a large-scale pipeline of (standardized) sustainable energy investments (in terms of number of and/or amount of investment);
- Investments in sustainable energy triggered by the project (million Euro);
- Primary energy savings triggered by the project (in GWh/year).

Additional positive effects can be quantified and reported when relevant and wherever possible:

• Reduction of the greenhouse gases emissions (in tCO2-eq/year) and/or air pollutants (in kg/year) triggered by the project.







Annexe 2







k ★ F	H2020 Key Performance Indicators					
	#	Key performance indicator ²	Definition of the indicator	Type of data required	Baseline at the start of Horizon 2020 (latest available) ³	Target at the end of Horizon 2020
SOCIETAL CHALENGES	14	Societal Challenges - Publications in peer-reviewed high impact journals in the area of the different Societal Challenges	The percentage of publications published in the top 10% impact ranked journals by subject category	Publications from relevant funded projects (DOI: Digital Object Identifiers); Journal impact benchmark (ranking) data to be collected by commercially available bibliometric databases	[<u>new</u> <u>approach</u> under Horizon 2020]	[On. average, 20 publications per €10 million funding (for all societal challenges)]
	15	Societal Challenges - Patent applications and patents awarded in the area of the different Societal Challenges	Number of patent applications by theme; Number of awarded patents by theme	Patent application number	[new approach under Horizon 2020]	On average, 2 per €10 million funding (2014 - 2020)
	16	Societal Challenges - Number of prototypes and testing activities	Number of prototypes, testing (feasibility/demo) activities, clinical trials	Reports on prototypes, and testing activities, clinical trials	[<u>new approach</u> under Horizon 2020]	[To be developed on the basis of first Horizon 2020 results]
SOCIETAL CHALENGES	17	Societal Challenges - Number of joint public-private publications	Number and percentage of joint public-private publications out of all relevant publications	Properly flagged publications data (DOI) from relevant funded projects	[<u>new approach</u> under Horizon 2020]	[To be developed on the basis of first Horizon 2020 results]
SOCIETAL	18	New products, processes, and methods launched into the market	Number of projects with new innovative products, processes and methods	Project count and drop down list allowing to choose the type processes, products and methods	[new approach under Horizon 2020]	[To be developed on the basis of first Horizon 2020 results]
*** 020	19	Percentage of the overall Energy challenge funds allocated to the following research activities: renewable energy, end user energy- efficiency, smart grids and energy storage activities	Percentage of the overall Energy challenge funds allocated to the following research activities: renewable energy, end user energy- efficiency, smart grids and energy storage activities	Financial data related to the funds allocated to the mentioned activities under Societal Challenge "Secure, clean and efficiency energy"	[new approach under Horizon 2020]	85%







CSA Award criteria

	Excellence The following aspects will be taken into account, to the extent that the proposed work corresponds to the topic description in the work programme:	Impact	Quality and efficiency of the implementation
All types of action	Clarity and pertinence of the objectives; Soundness of the concept, and credibility of the proposed methodology;	The extent to which the outputs of the project would contribute to each of the expected impacts mentioned in the work programme under the relevant topic;	Quality and effectiveness of the work plan, including extent to which the resources assigned to work packages are in line with their objectives and deliverables; Appropriateness of the management structures and procedures, including risk and innovation management; Complementarity of the participants and extent to which the consortium as whole brings together the necessary expertise; Appropriateness of the allocation of tasks, ensuring that all participants have a valid role and adequate resources in the project to fulfil that role.
Coordination & support actions (CSA)	Quality of the proposed coordination and/or support measures.	 Quality of the proposed measures to: Exploit and disseminate the project results (including management of IPR), and to manage research data where relevant. Communicate the project activities to different target audiences 	





