

## Annex 1

### Primary panel structure

#### ***Physical Sciences & Engineering***

##### **PE1 Mathematics**

All areas of mathematics, pure and applied, plus mathematical foundations of computer science, mathematical physics, and statistics.

##### **PE2 Fundamental Constituents of Matter**

Particle, nuclear, plasma, atomic, molecular, gas, and optical physics.

##### **PE3 Condensed Matter Physics**

Structure, electronic properties, fluids, nanosciences, biological physics.

##### **PE4 Physical and Analytical Chemical Sciences**

Analytical chemistry, chemical theory, physical chemistry/chemical physics.

##### **PE5 Synthetic Chemistry and Materials**

New materials and new synthetic approaches, structure-properties relations, solid state chemistry, molecular architecture, organic chemistry.

##### **PE6 Computer Science and Informatics**

Theoretical and experimental computer science, information processing, intelligent systems.

##### **PE7 Systems and Communication Engineering**

Electrical, electronic, communication, optical and systems engineering.

##### **PE8 Products and Processes Engineering**

Product and process design, chemical, civil, environmental, mechanical, vehicle engineering, energy processes and relevant computational methods.

##### **PE9 Universe Sciences**

Astro-physics/-chemistry/-biology; solar system; planetary systems; stellar, galactic and extragalactic astronomy; cosmology; space sciences; astronomical instrumentation and data.

##### **PE10 Earth System Science**

Physical geography, geology, geophysics, atmospheric sciences, oceanography, climatology, cryology, ecology, global environmental change, biogeochemical cycles, natural resources management.

##### **PE11 Materials Engineering**

Advanced materials development: performance enhancement, modelling, large-scale preparation, modification, tailoring, optimisation, novel and combined use of materials, etc.

## Life Sciences

### **LS1 Molecules of Life: Biological Mechanisms, Structures and Functions**

*For all organisms:* Molecular biology, biochemistry, structural biology, molecular biophysics, synthetic and chemical biology, drug design, innovative methods and modelling.

### **LS2 Integrative Biology: From Genes and Genomes to Systems**

*For all organisms:* Genetics, epigenetics, genomics and other 'omics studies, bioinformatics, systems biology, genetic diseases, gene editing, innovative methods and modelling, 'omics for personalised medicine.

### **LS3 Cell Biology, Development, Stem Cells and Regeneration**

*For all organisms:* Structure and function of the cell, cell-cell communication, embryogenesis, tissue differentiation, organogenesis, growth, development, evolution of development, organoids, stem cells, regeneration, therapeutic approaches.

### **LS4 Physiology in Health, Disease and Ageing**

Organ and tissue physiology, comparative physiology, physiology of ageing, pathophysiology, inter-organ and tissue communication, endocrinology, nutrition, metabolism, interaction with the microbiome, non-communicable diseases including cancer (and except disorders of the nervous system and immunity-related diseases).

### **LS5 Neuroscience and Disorders of the Nervous System**

Nervous system development, homeostasis and ageing, nervous system function and dysfunction, systems neuroscience and modelling, biological basis of cognitive processes and of behaviour, neurological and mental disorders.

– *In humans and all other organisms*

### **LS6 Immunity, Infection and Immunotherapy**

The immune system, related disorders and their mechanisms, biology of infectious agents and infection, biological basis of prevention and treatment of infectious diseases, innovative immunological tools and approaches, including therapies.

### **LS7 Prevention, Diagnosis and Treatment of Human Diseases**

Medical technologies and tools for prevention, diagnosis and treatment of human diseases, therapeutic approaches and interventions, pharmacology, preventative medicine, epidemiology and public health, digital medicine.

### **LS8 Environmental Biology, Ecology and Evolution**

*For all organisms:* Ecology, biodiversity, environmental change, evolutionary biology, behavioural ecology, microbial ecology, marine biology, ecophysiology, theoretical developments and modelling.

### **LS9 Biotechnology and Biosystems Engineering**

Biotechnology using all organisms, biotechnology for environment and food applications, applied plant and animal sciences, bioengineering and synthetic biology, biomass and biofuels, biohazards.

## ***Social Sciences & Humanities***

### **SH1 Individuals, Markets and Organisations**

Economics, finance, management.

### **SH2 Institutions, Governance and Legal Systems**

Political science, international relations, law.

### **SH3 The Social World and Its Interactions**

Sociology, social psychology, education sciences, communication studies.

### **SH4 The Human Mind and Its Complexity**

Cognitive science, psychology, linguistics.

### **SH5 Texts and Concepts**

Literary studies, literature, philosophy.

### **SH6 The Study of the Human Past**

Archaeology and history.

### **SH7 Human Mobility, Environment, and Space**

Human geography, demography, health, sustainability science, territorial planning, spatial analysis.

### **SH8 Studies of Cultures and Arts**

Social anthropology, studies of cultures, studies of arts.