



Presentation held on 24th February 2016 at  
Piccolo Teatro in Milan  
*Roberto Cingolani (IIT - Scientific Director)*

2030: WHO has calculated 13 M people will die of cancer worldwide

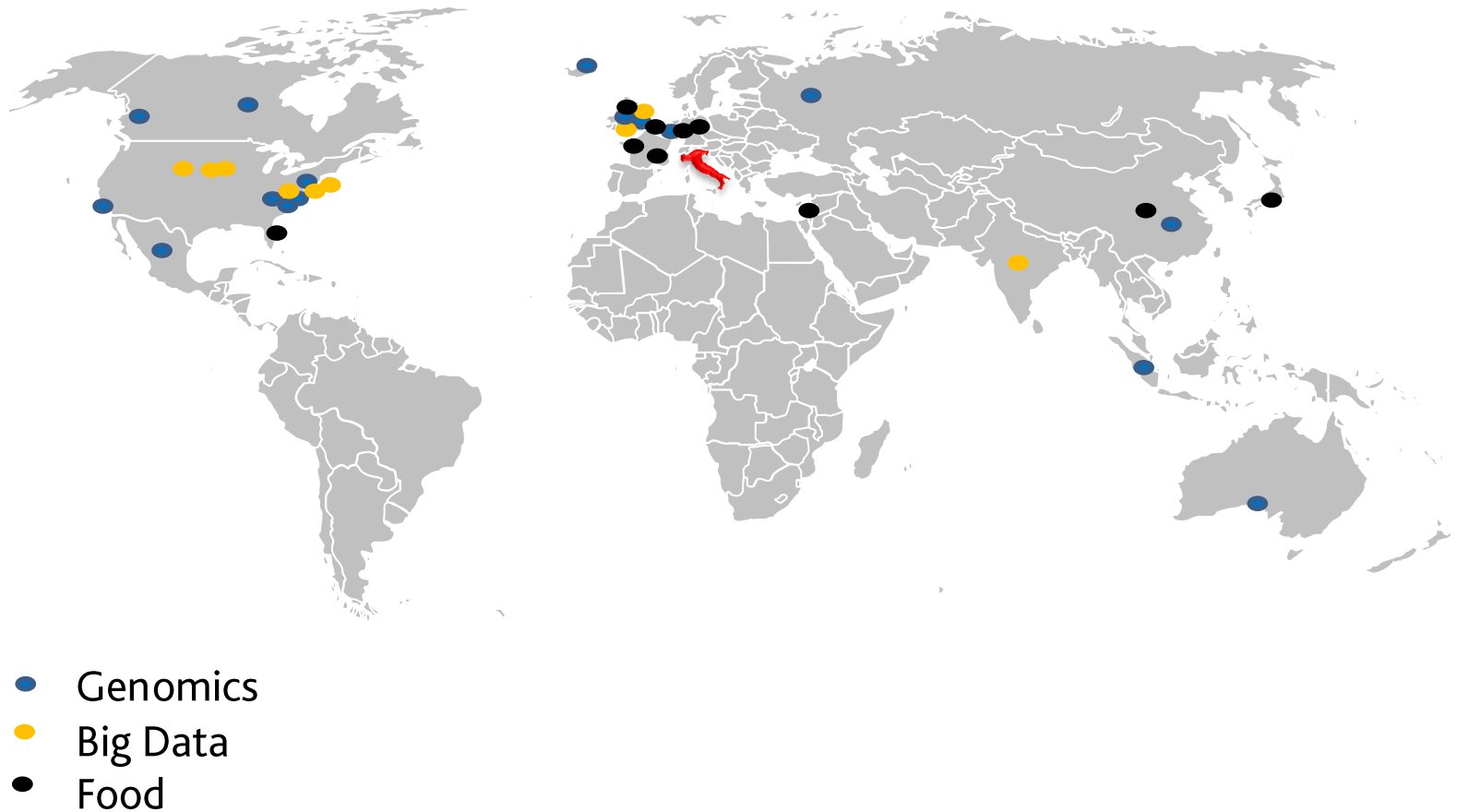
2008: 2,45 M people were diagnosed with cancer in EU - 1,23 M died because of cancer. Cancer cost = 126 B€

2050: 100 M will suffer from a neurodegenerative disease, Today: 35 M people worldwide

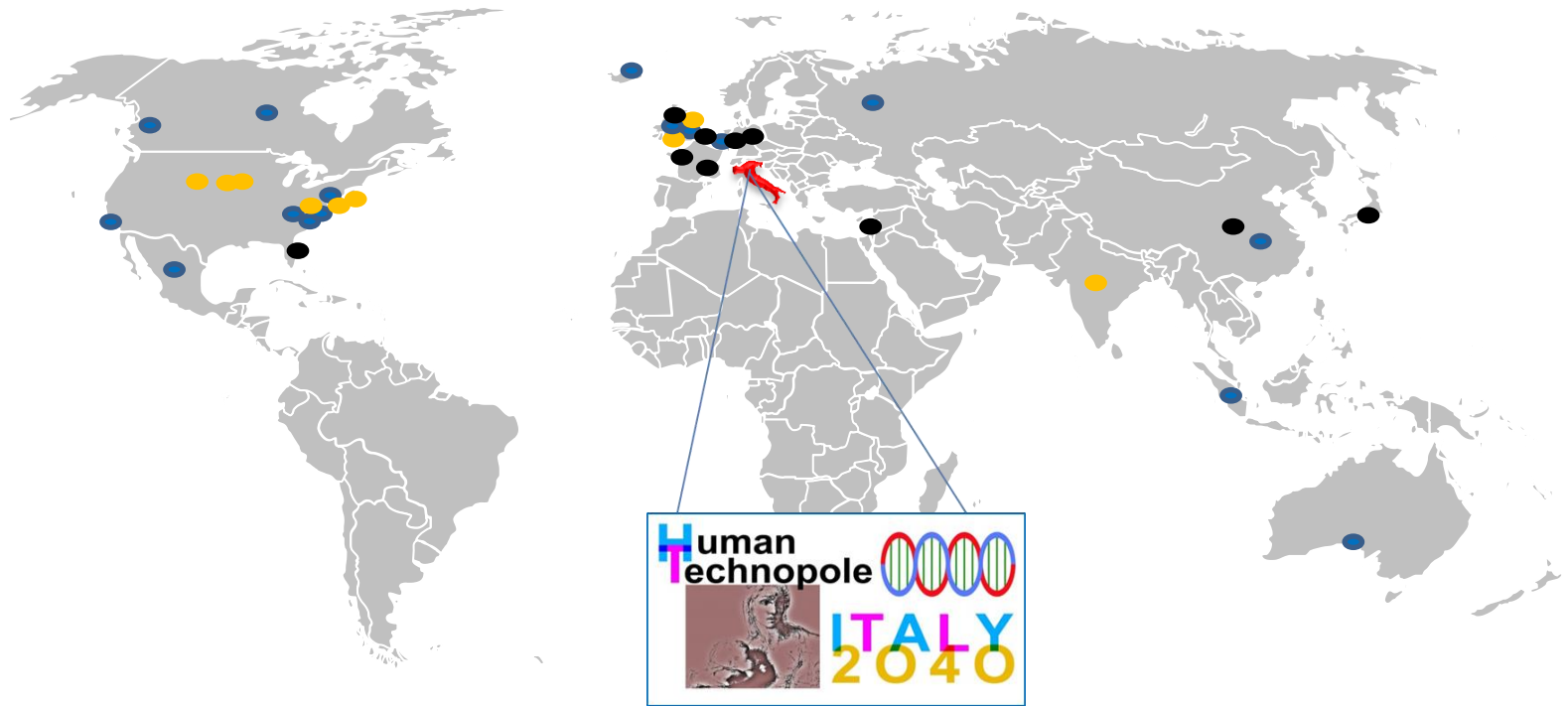


Italy: [ 2014: 366,000 new cancer cases (1,000 per day)  
Today: about 1.2 millions of neurodegenerative diseases

*Development of Precision Medicine, combining Genomics, Big-Data Analytics, New Diagnostic Technologies for cancer and neurodegenerative diseases*

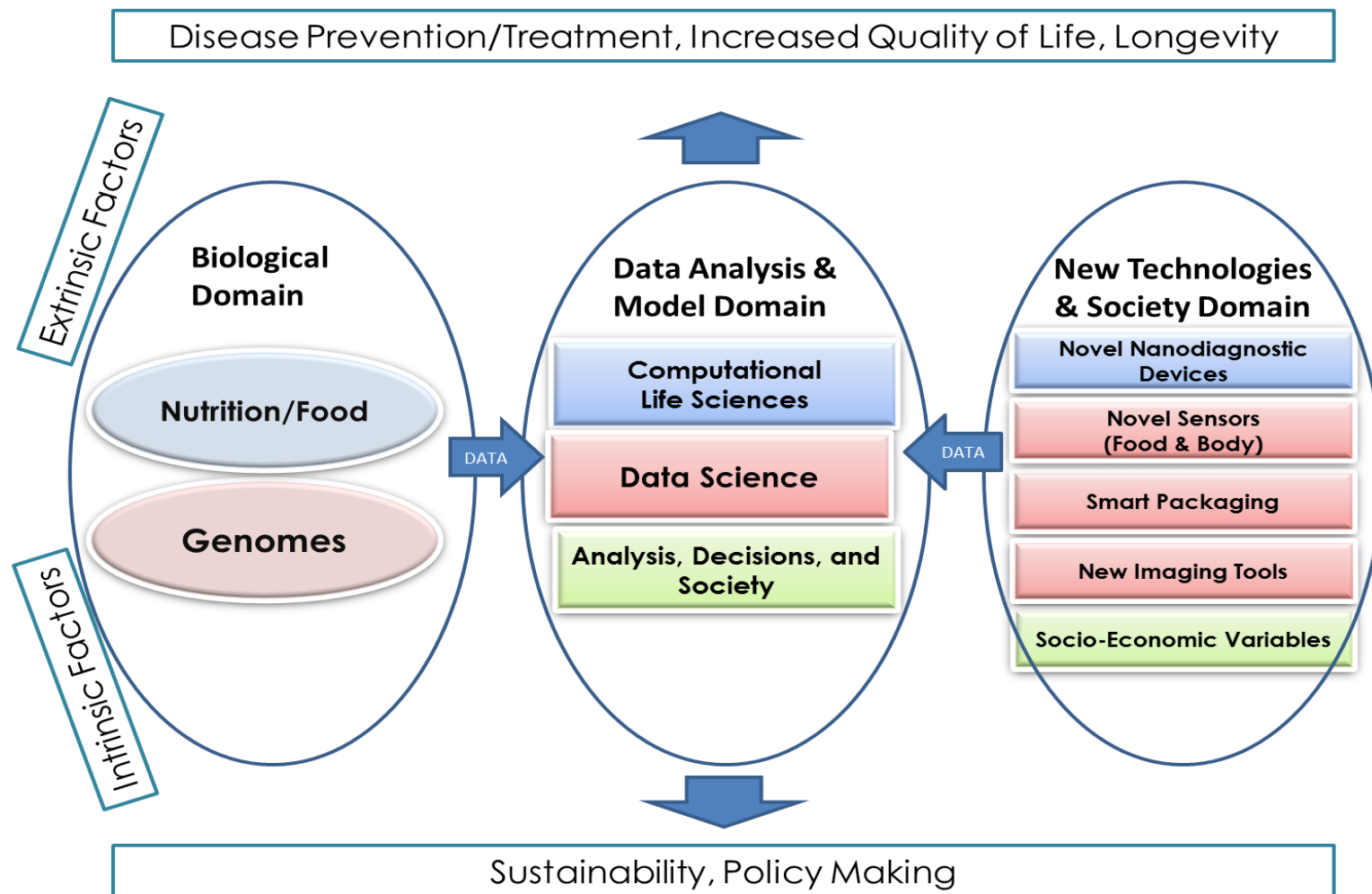


Development of Precision Medicine, combining Genomics, Big-Data Analytics, New Diagnostic Technologies for cancer and neurodegenerative diseases



Life expectancy 82 years old  
World reference point for Food and Nutrition

## ITALY 2040: the Vision



## Structure of the Human Technopole

### 7 RESEARCH CENTERS

- ☐ Medical Genomics Center
- ☐ Neurogenomics Center
- ☐ AgriFood & Nutrition Genomics Center
- ☐ Data Science Center
- ☐ Center for Computational Life Science
- ☐ Center for Nanoscience and Technology
- ☐ Center for Analysis, Decisions, Society

### 3 FACILITIES

- ☐ Central Genomics
  - ☐ Imaging
  - ☐ Data Storage & HPC
- ← Internal call for ideas

## The Team in Milan



Organizing Committee  
Deans of the Institutions



ISI Foundation



FONDAZIONE  
EDMUND  
MACH

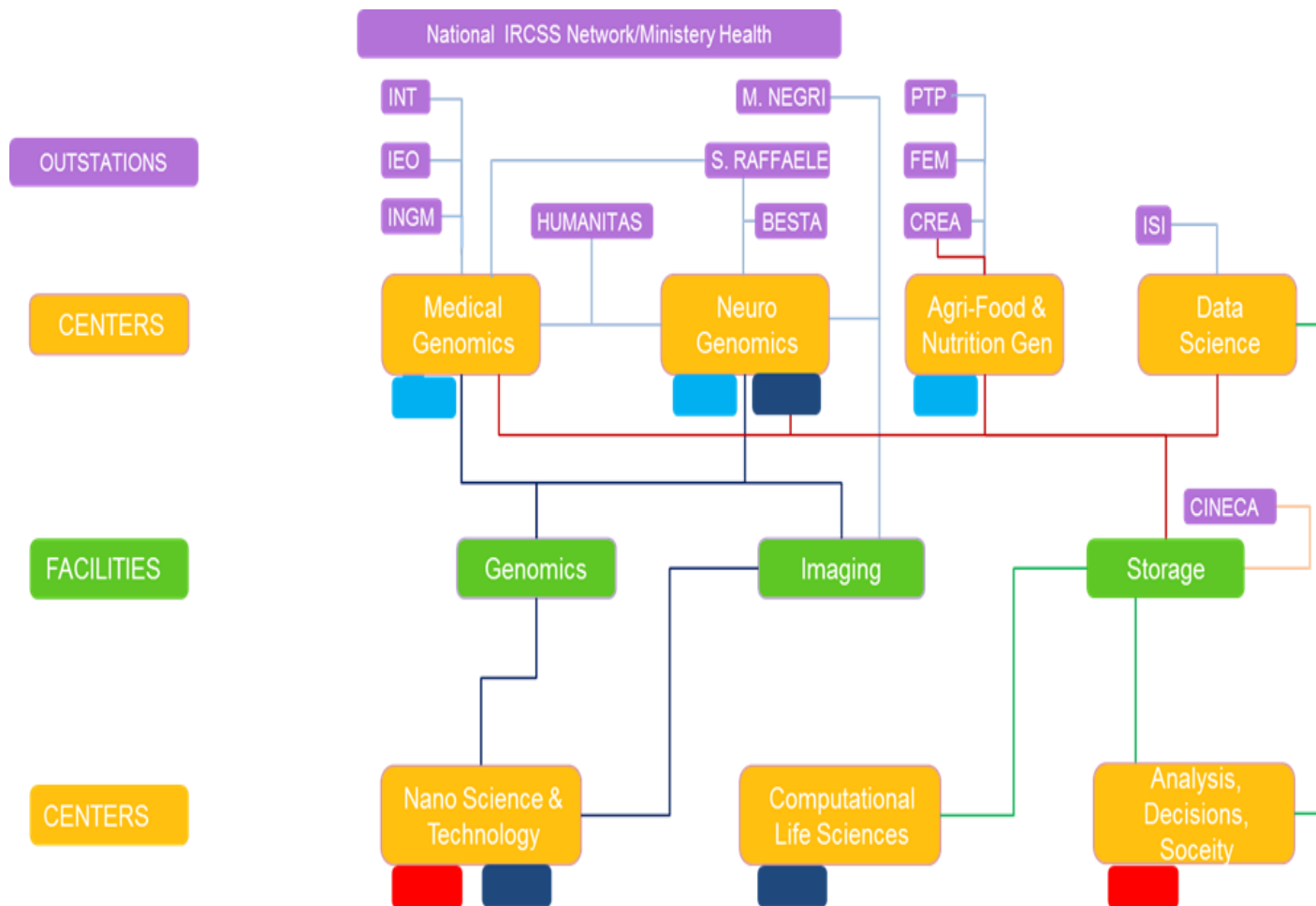


- >110 meetings in 66 days
- 2 plenary meetings
- 9 work groups

	MGC	NGC	AFNGC	DSC	CLSC	CADS	CNST
UniMi	JL	JL	JL				
Bicocca		JL			JL		JL
PoliMi						JL	JL
Humanitas	@						
IEO	RC						
INT	RC						
INGM	@						
OSR	@						
Besta		@					
M. Negri		@					
FEM			@			@	
ISI				RC			
CREA			RC				
PTP			RC				
CINECA					@		

JL= Joint Lab, RC= Research Contract, @= IIT@host

## Organization of the Human Technopole



Universities

UniMi

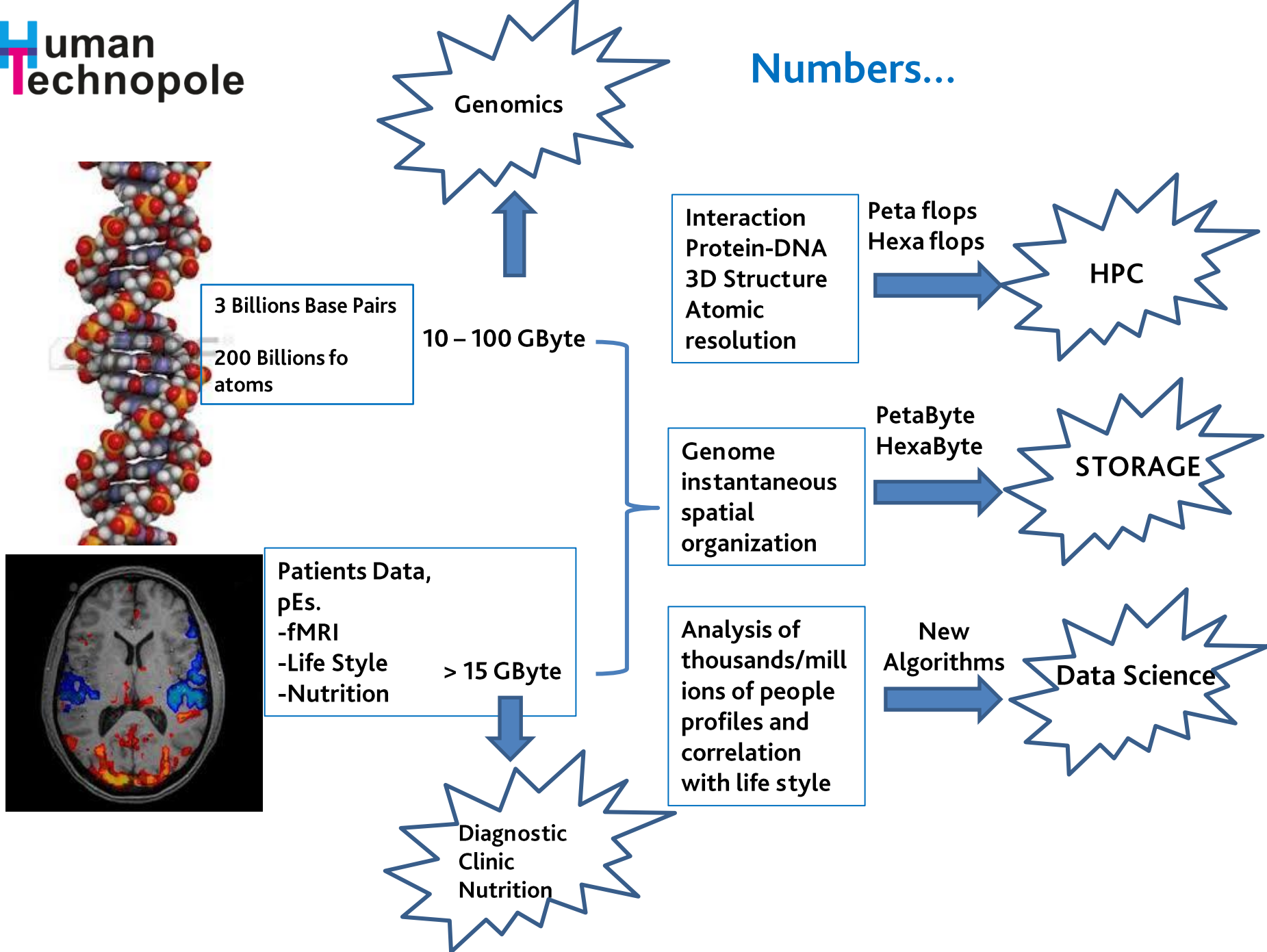
Bicocca

Polimi



## Main expected results

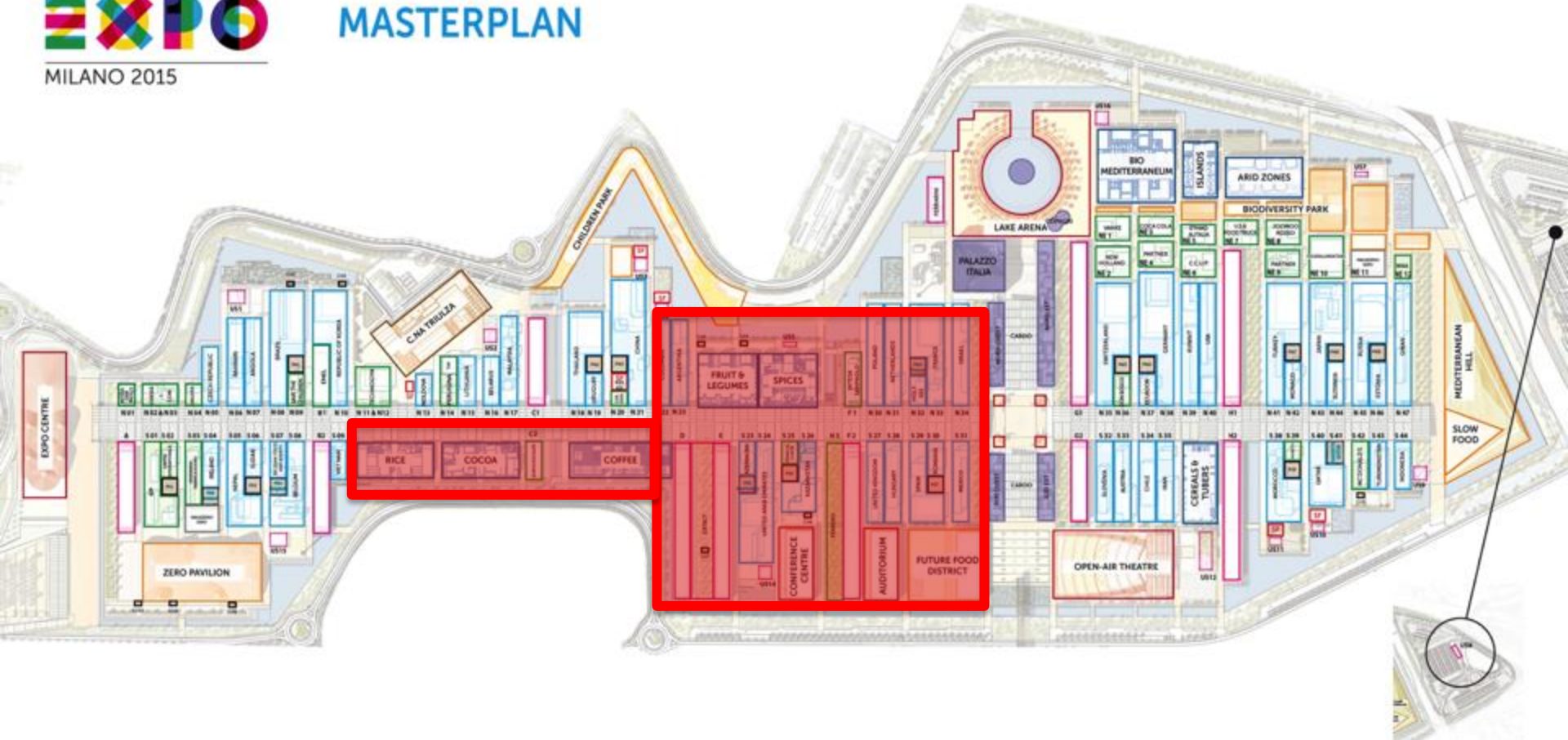
1. Realization of a major research infrastructure: 7 centers, > 30000 sqm, about 100 new research Teams, about 1500 people (*reverse brain drain*)
2. National Genetic Screening Campaign (about 7000 screening/year)
3. Nutrigenomics e Preventive Nutrition
4. HPC infrastructure and National DataBase
5. Big Data Analytics new methods and Predictive models (health and society)
6. Smart and personalized medicine
7. New diagnostic techniques for human health and food
8. Public – private Partnerships





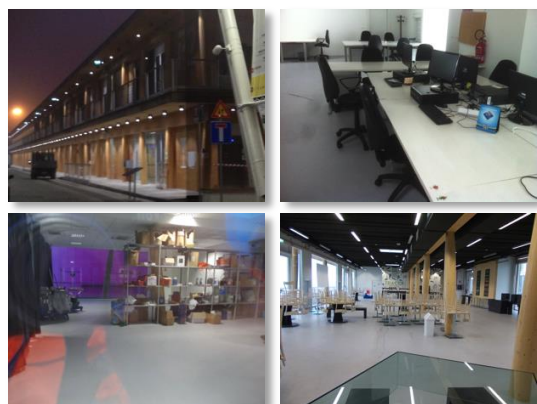
MILANO 2015

## MASTERPLAN

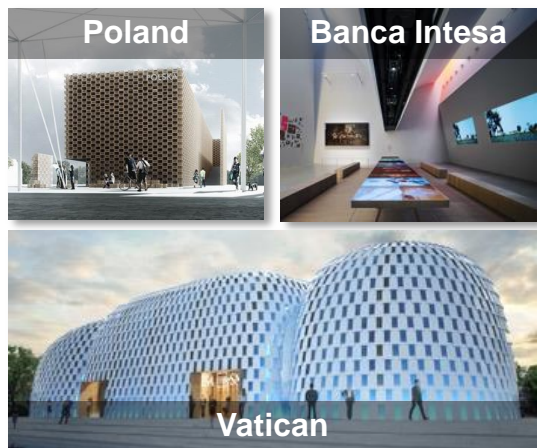


## ~24,000 mq di infrastrutture Expo adattabili

### Expo service facilities



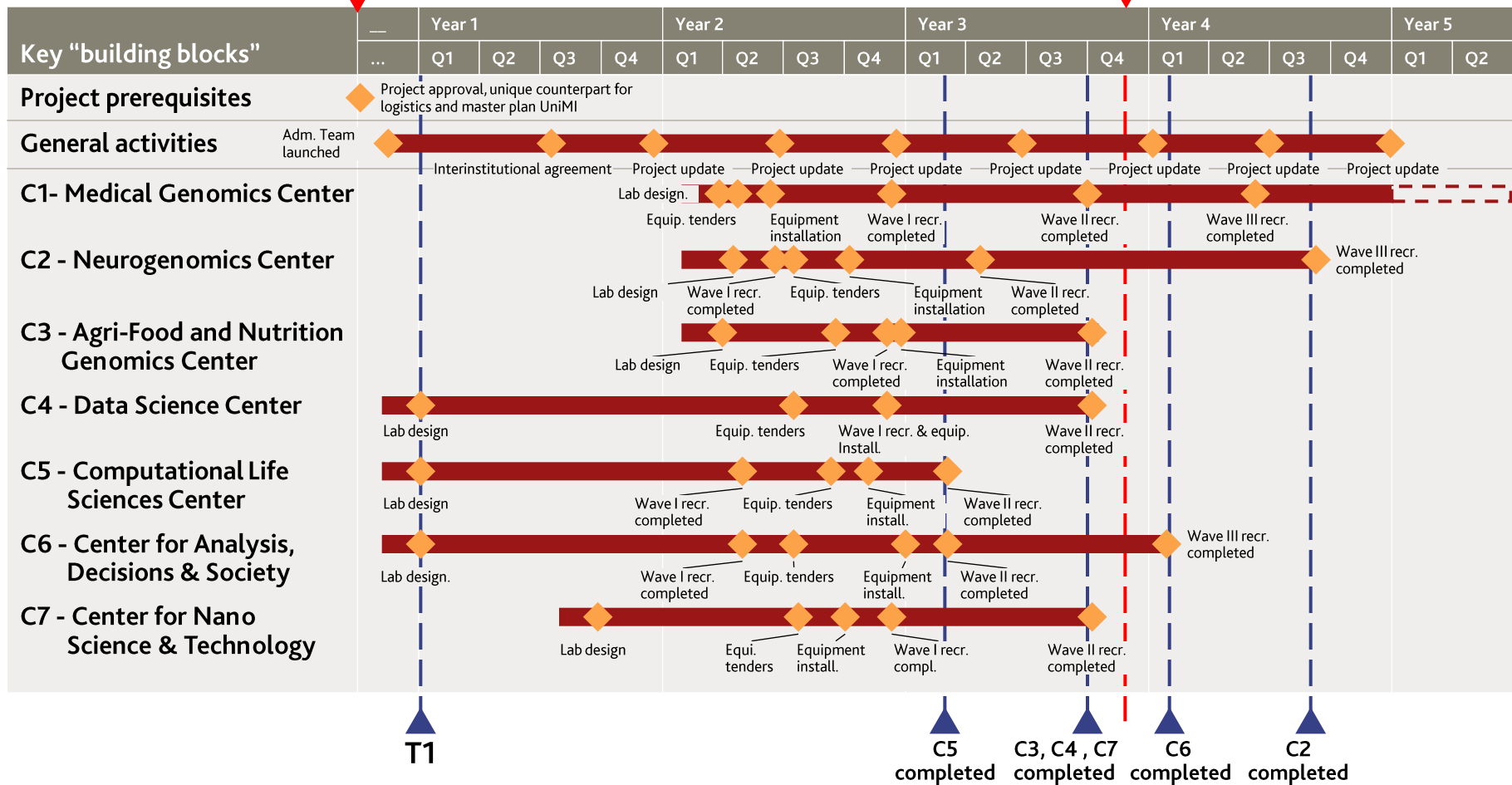
### Available Pavilions - selection



Infrastructure	Total usable area (All floors)	
<b>Building D</b> (Expo service facilities)	3,480	Already in good conditions, can be refurbished with a smaller effort in a shorter period of time
<b>Building E</b> (Expo service facilities)	3,604	
<b>Building H1</b> (Expo service facilities)	3,188	
<b>TCP 1 warehouse</b>	2,000	Already in good conditions, can be refurbished with a smaller effort Due to the size and design suitable for shared facilities, meeting areas and museum
<b>TCP 2 warehouse</b>	2,000	
<b>TCP 3 warehouse</b>	2,000	
<b>Intesa San Paolo</b>	1,785	Require more adjustments (and longer time) to make them compatible with laboratories and other Human Technopole activities
<b>Poland</b>	1,367	
<b>Mexico</b>	1,680	
<b>Hungary</b>	697	
<b>Conference Center</b>	2,000	
<b>Vatican</b>	344	
<b>Totale</b>	<b>24,145</b>	

Project International evaluation

HT international evaluation



## Staff Growth forecast

Profiles	Hiring Program				
	Year 1	Year 2	Year 3	Year 4	Total
Coordinators	7	-	-	-	7
Tenure/Tenured	2	42	37	14	95
Researchers	11	65	37	5	118
Technologists	3	16	11	-	30
Post Doc	22	180	128	42	372
Technicians	12	47	22	12	93
Subtotal	50	357	235	73	715
Admin/Support					222
PHD	32	217	153	45	447
Total					1.384*

International Calls



\* Not including people staffed on grants, seed programs etc  
Source: IIT, A.T. Kearney

# Staff Growth forecast

evaluation

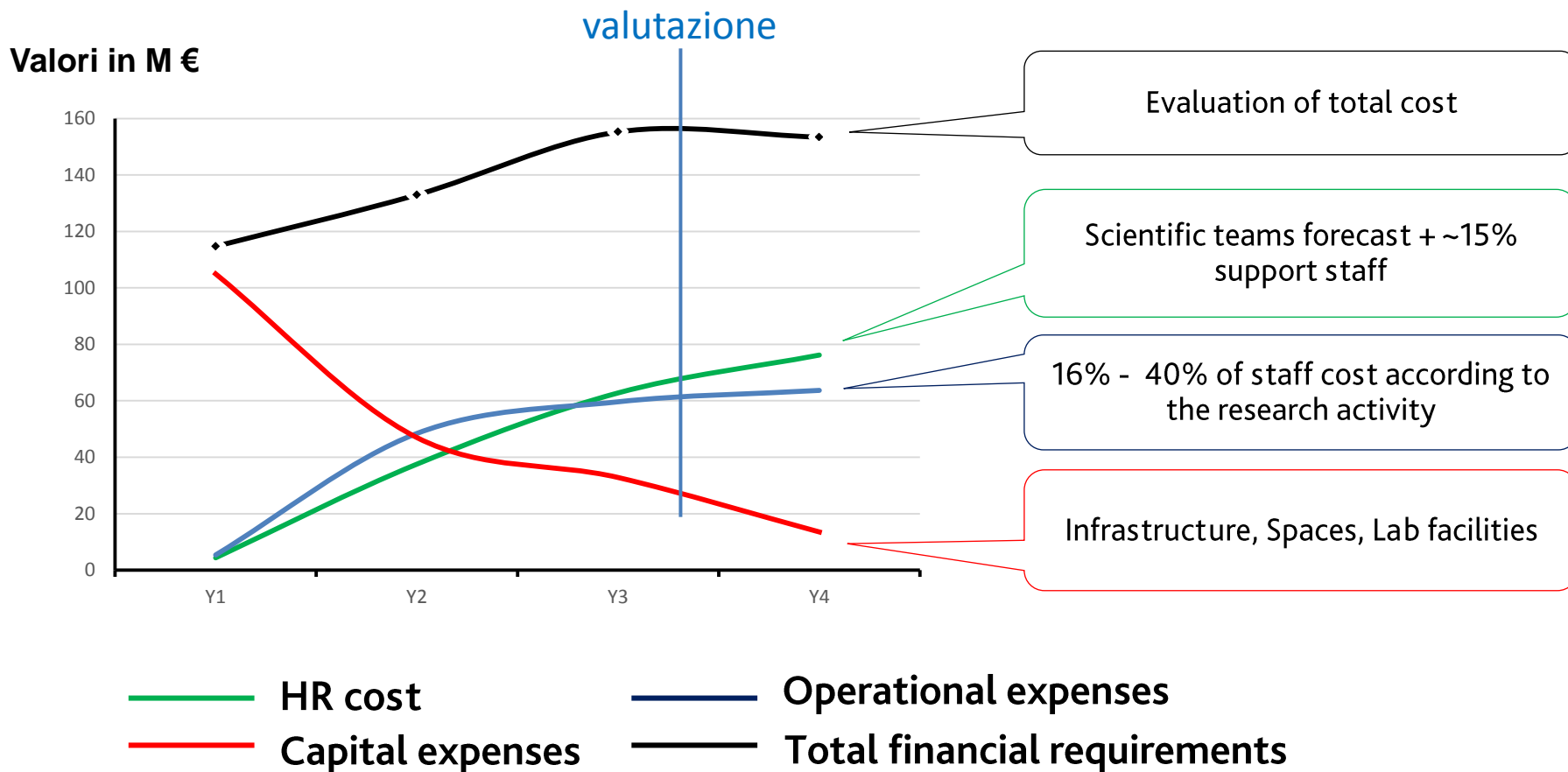
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## Financial needs

Considering: standard costs, standard sqm per person, standard running costs etc.





## Basic requirement

- **Need of stable funding regulation**
- **Need of timing and logistics**
- **Need of a global masterplan for the Expo Area, Università Statale Campus, Industries area, outreach...etc**