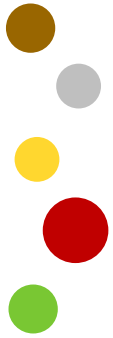


# Constancies in the international scientific context:

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Isabel Fortier, Ph.D.  
Director, Maelstrom Research  
Research Institute of the McGill University Health Centre



# The key to success



Quality



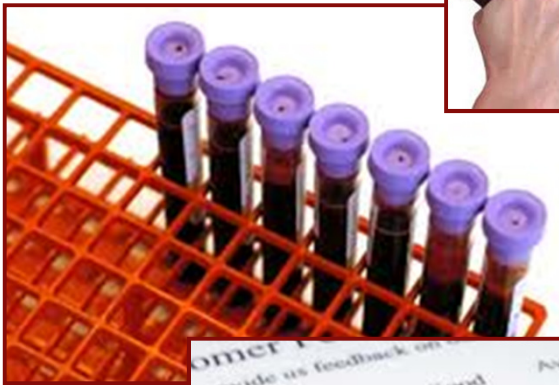
Range of information  
Number of participants

Quantity



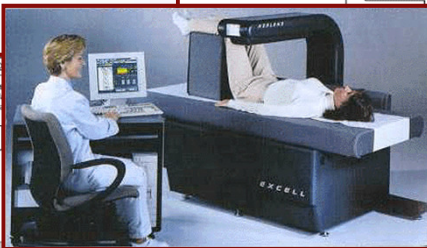
Usage

# Quality

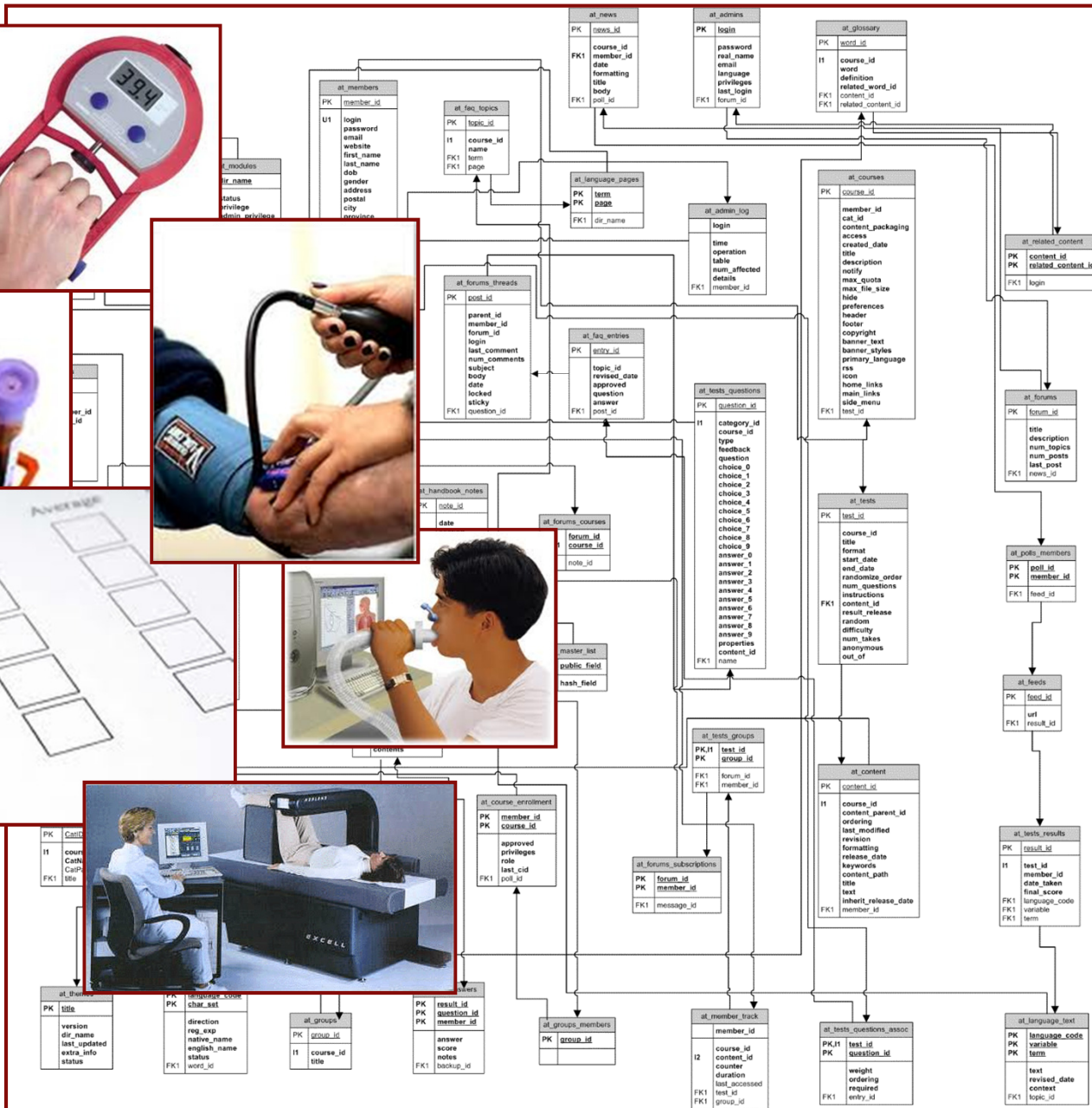


provide us feedback on

Excellent	Very Good	Average
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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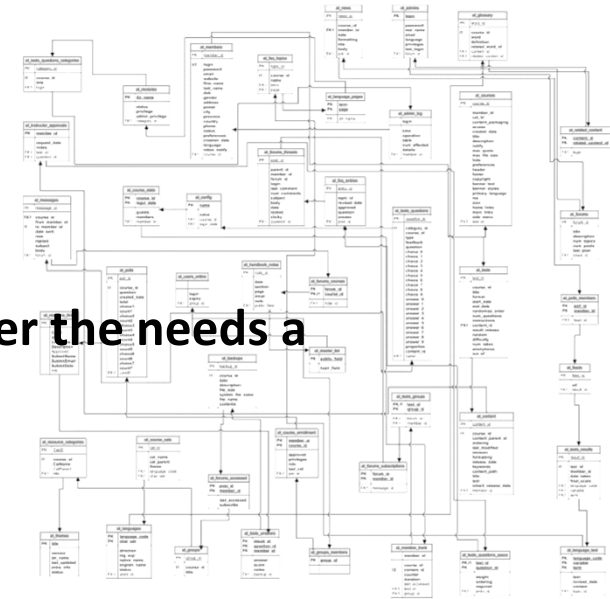
Scientific value of the information collected and rigor of the procedures used to collect, manage and transfer data





# Quantity

- **Access to the information required to answer the needs a broad range of *future* users**
  - Health and risk factor questionnaires
  - Physical measures
  - Bio-samples
  - Information extracted from registries (e.g. health outcomes, geo-coded environmental exposures, socio-economic environment)
  - Clinical outputs...
- **Sufficient number of participants/cases**
  - Large samples
  - Potential for collaboration/harmonization with other cohorts

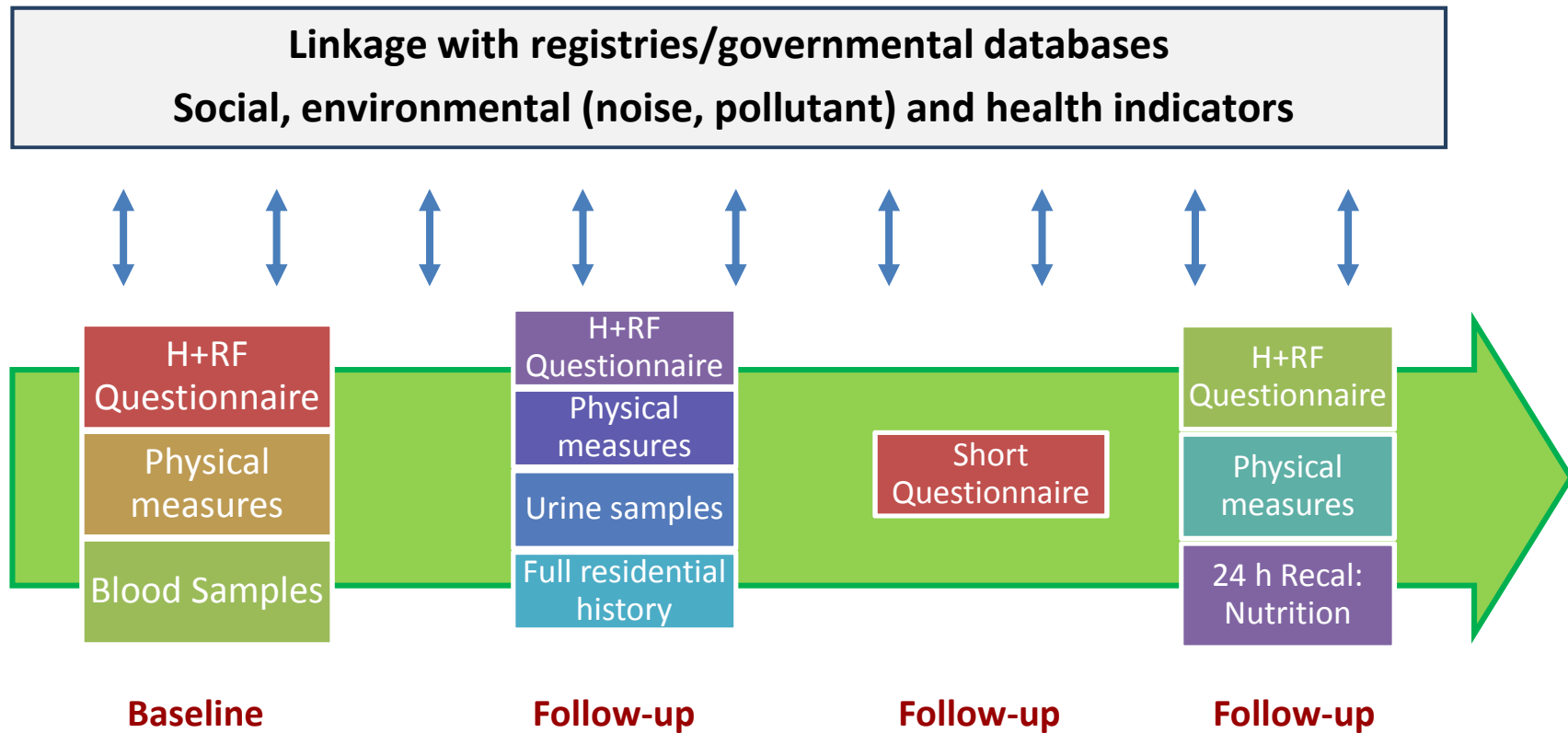


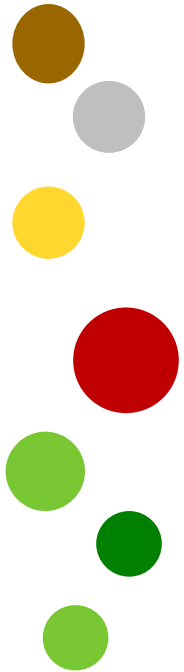


## Usage

- **Generate interest (buy-in) from the scientific community/users**
- **Implement adequate infrastructures :**
  - Security, confidentiality, trust
  - Stable through time
  - Access to data: simple procedures, low cost
  - Proper access to information/documentation (e.g. access to SOPs, variable list and characteristics, descriptive statistics, etc.) ...

# A cohort, a living entity...



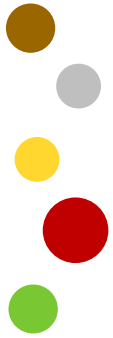


# Portrait of population-based studies across the world

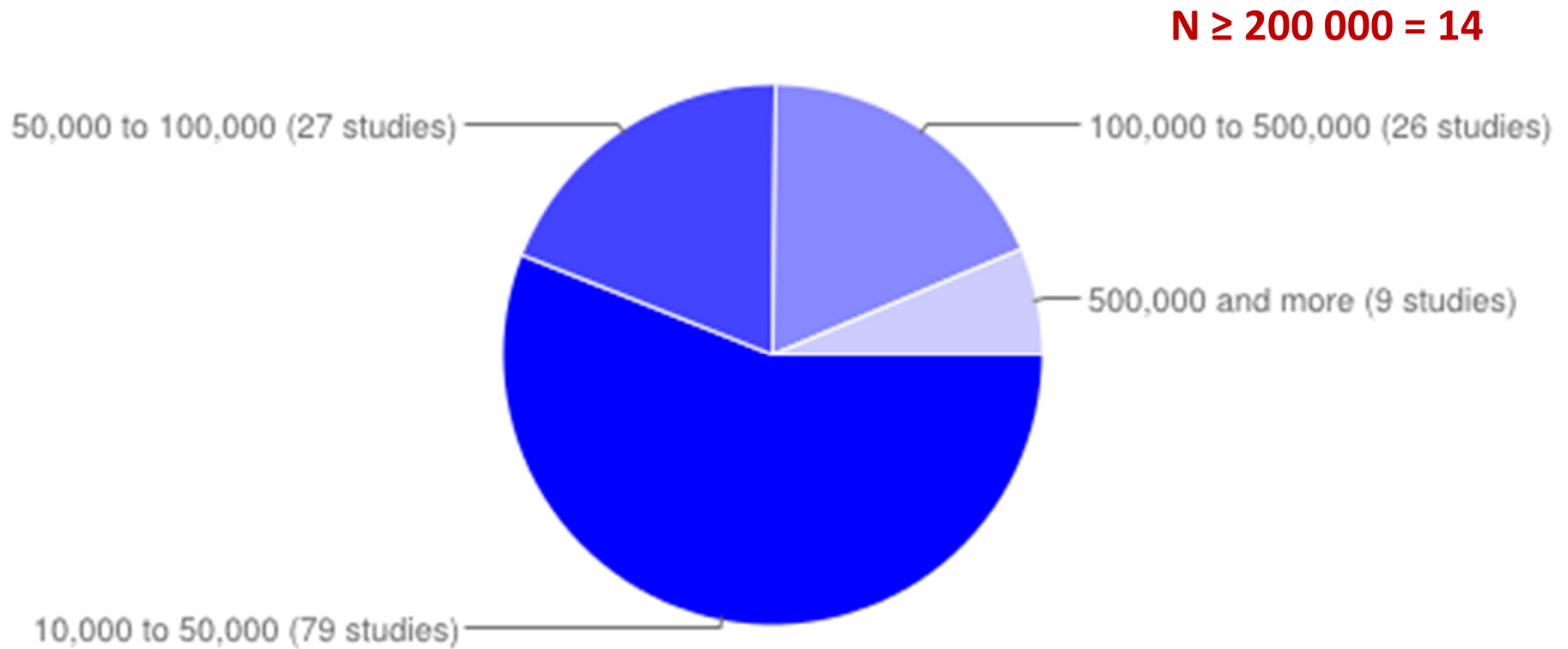
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## ***Survey 170 population-based studies with***

- More than 10 000 healthy individuals
- Collect information on health status and health determinants
- Collect biological samples

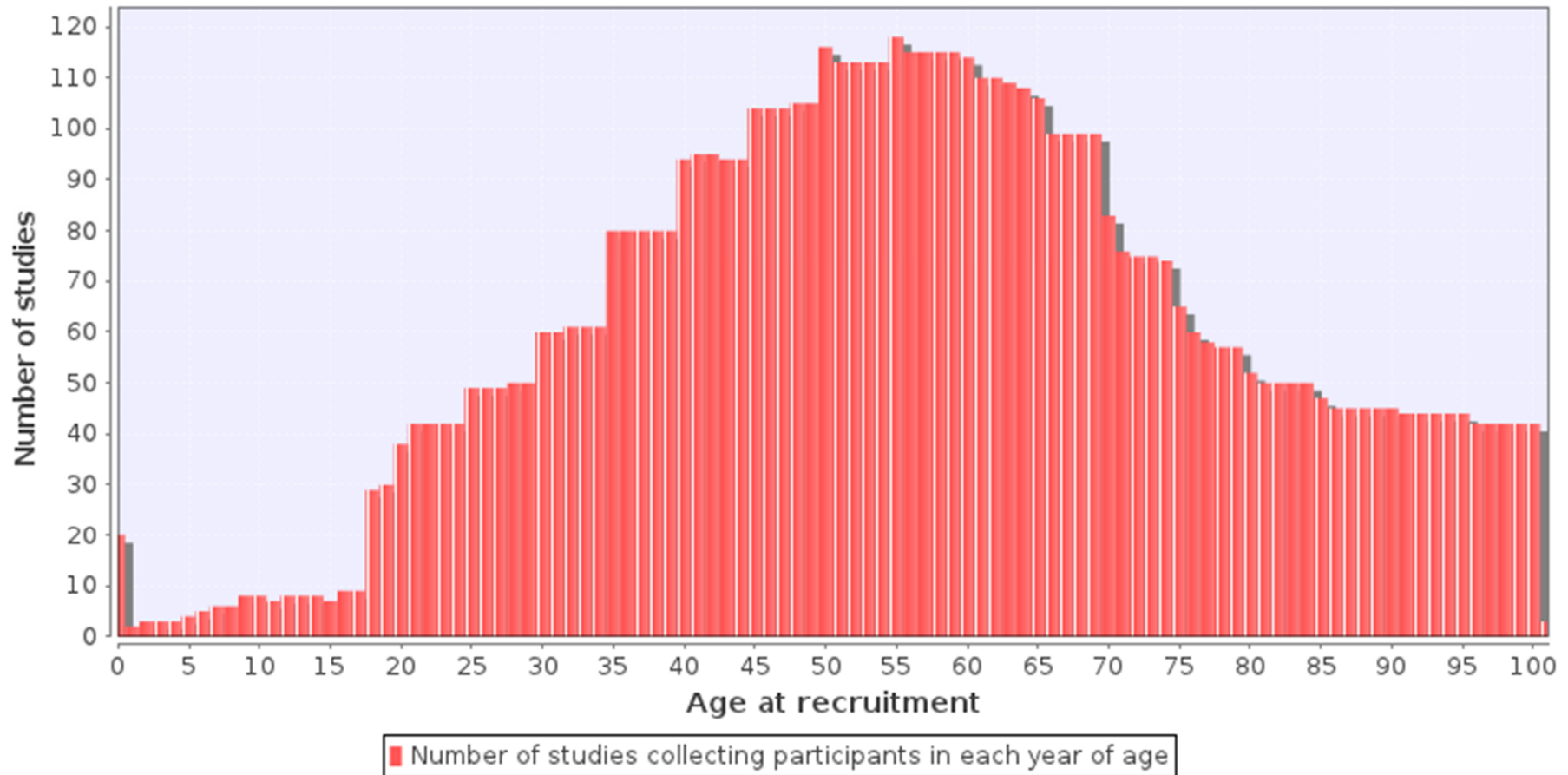


## Number of participants targeted (recruited or to be recruited) (N = 141)

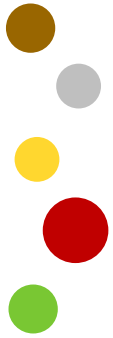




## Age of participants at recruitment (N = 146)



Extracted from the P<sup>3</sup>G Study Catalogue



## Bio-samples collected

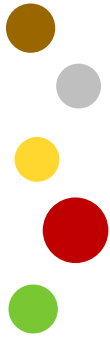
- Blood 93%
- Urine 32%
- Buccal cells 23%
- Saliva 15%



## Domain of information most frequently collected (questionnaire) (N=48)

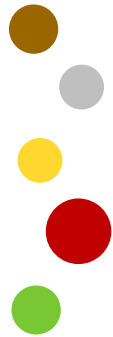
Domain	Coverage (>80%)
Individual disease history Neoplasms, endocrine, cardiovascular, respiratory, digestive diseases (>80%)	98%
Tobacco use	98%
Medication intake	96%
Physical activity	94%
Alcohol use	92%
Medical health intervention	90%
Working status	90%
Familial disease history	88%
Nutrition	88%
Household status	88%
Education level	88%
Environmental exposures	81%

***Also collected by Constances !!***



## Physical measures most frequently collected

Physical measures	Coverage (>50%)
Weight/height	97%
Blood pressure	94%
Waist/hip circumference	77%
Heart rate	68%
Bone density	53%



## Constances vs other cohorts (examples of key domains collected)

Domain of information (questionnaire)		Coverage across cohorts
Life habits/Behavior	Illicit drug use	8%
	Sexual behaviours	19%
Physical environment	Occupational exposures*	29%
SES characteristics	Parents working status/history	5%
	Partner working status/history	21%

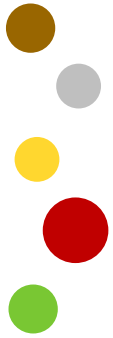
Physical measuresv	Coverage across cohorts
Cognitive Function	26%
Vision	29%
Hearing	21%

***\*Quality and quantity of information collected!!***



## CONSTANCES strengths

- **A vision:** Long term project with structured regular follow-up of participants
- **An infrastructure:** Linkage and integration with “health system/ registries/governmental data repository”
- **A scientific resource:** Generic, BUT unique...
  - All “basic/minimal” information/samples collected
  - Data collected for specific (and key) area of information will ensure Constances to have a “niche” in the biobanking world!
  - Will permit generation of a large number of scientific papers



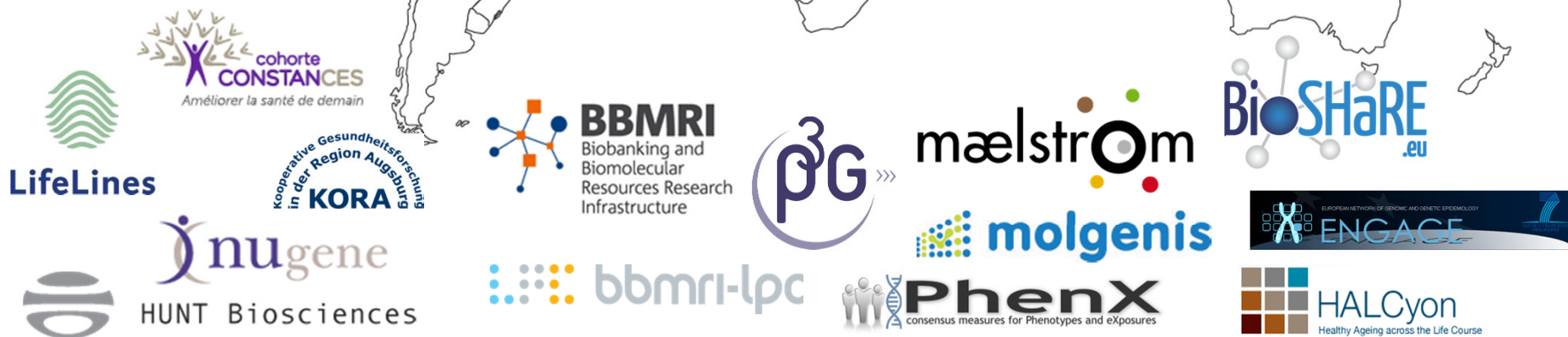
## **Increasing need of the scientific community to extend the impact of individual studies**

**Use data from multiple studies/biobanks to:**

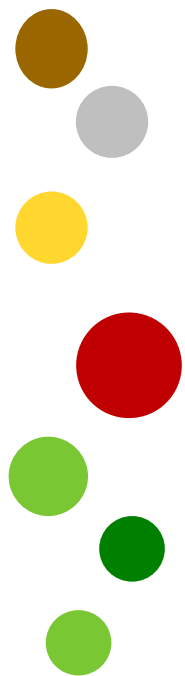
- **Compare data:**
  - Better understand similarities and differences across studies or jurisdictions.
- **Integrate data:**
  - Obtain numbers and statistical power required to investigate gene-environment interactions, less common events...

# Global International Landscape

Where is Constances?







**Thanks!**

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