

PFMI Cosmétique

a mutualised platform devoted to the
challenges of the cosmetics sector

Cosmetics market overview

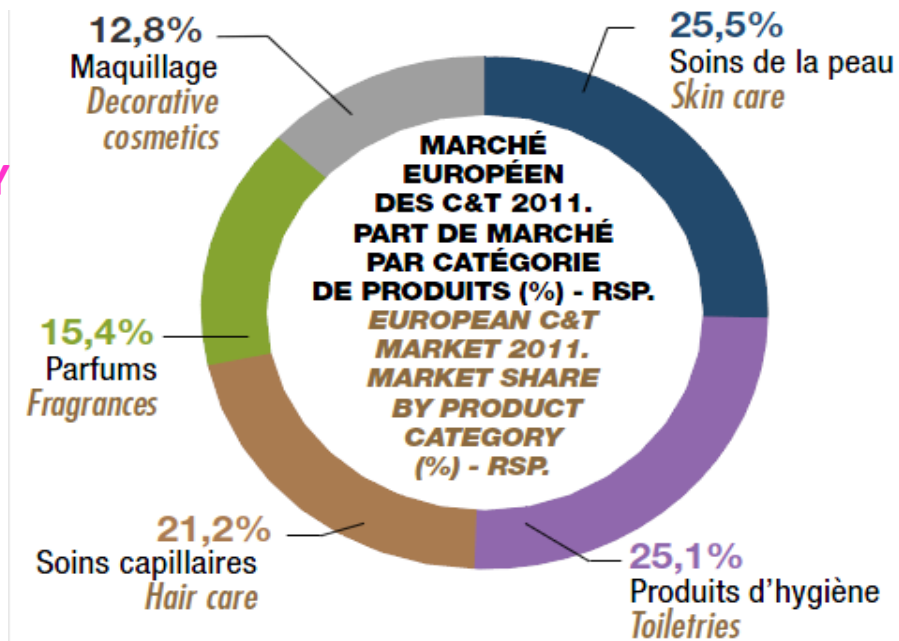
WHAT IS A COSMETIC PRODUCT ?

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DEFINITION

A cosmetic product is a **substance or mixture** that is intended to come into **contact with various external parts of the human body** (such as skin, hair, nails, lips or even teeth) in order to exclusively or predominantly **clean** them, **perfume** them, **change their appearance**, **protect** them, keep them in good condition or to remedy odours

MARKET SHARE BY PRODUCT CATEGORY (FOCUS ON EUROPE)



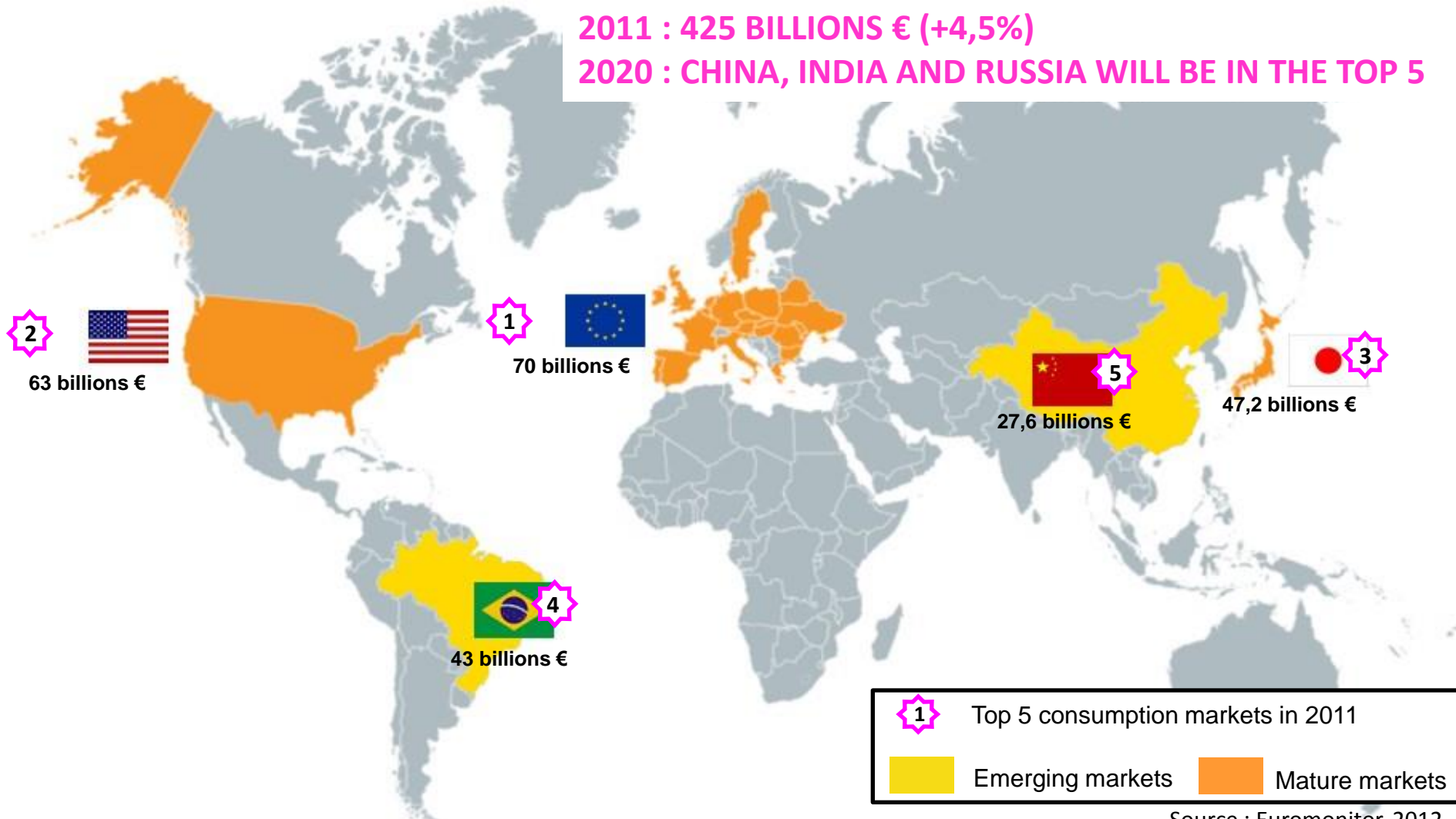


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COSMETICS: A GROWING MARKET

2011 : 425 BILLIONS € (+4,5%)

2020 : CHINA, INDIA AND RUSSIA WILL BE IN THE TOP 5



Source : Euromonitor, 2012



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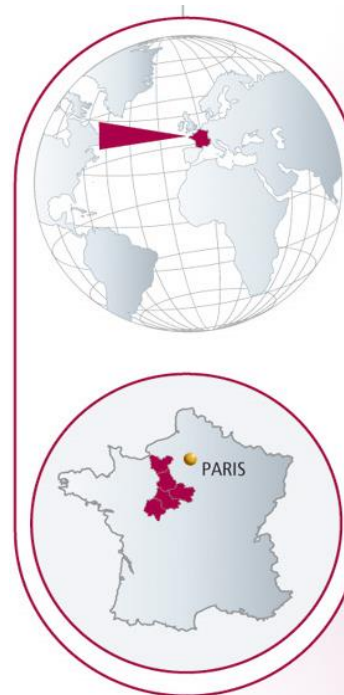
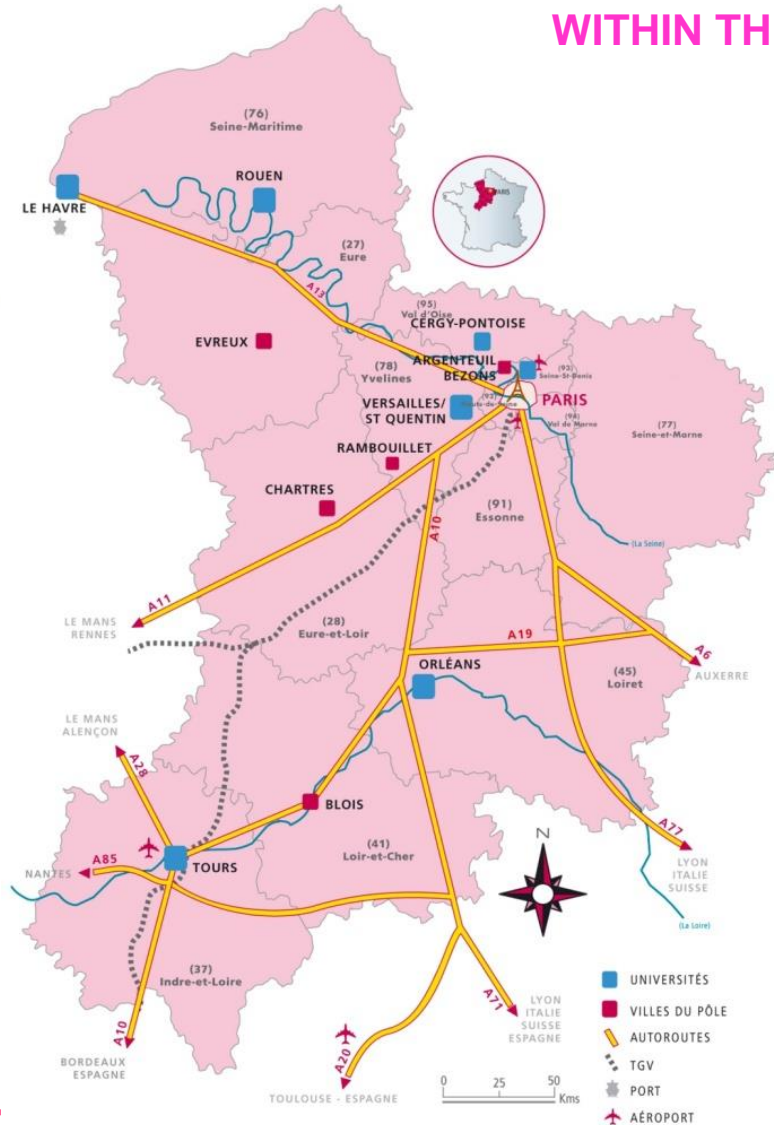
Cosmetic Valley



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COSMETIC VALLEY CLUSTER

THE WORLD'S GREATEST CONCENTRATION OF COMPETENCES
WITHIN THE PERFUME AND COSMETIC INDUSTRY.



KEY FIGURES

800 Companies (80 % SMEs)

70 000 jobs

18 billion turnover

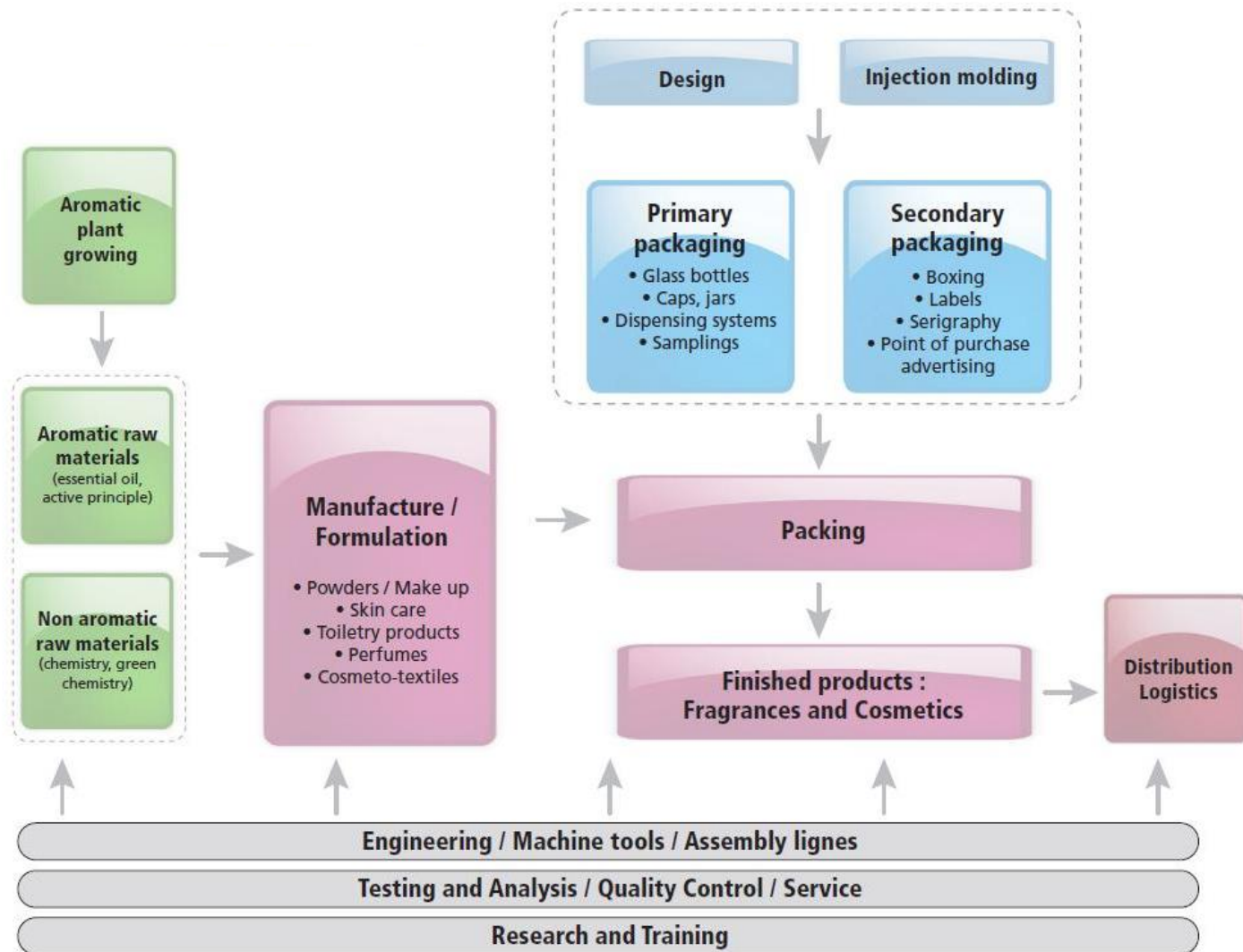
2nd biggest French exporting industry

7 Universities

CNRS, SOLEIL

8000 Research Scientists

A CLUSTER GATHERING THE WHOLE CHAIN VALUE



CLARINS
FRAGRANCE GROUP

COTY
Calvin Klein

PUIG

SHISEIDO

LVMH
MOËT HENNESSY • LOUIS VUITTON

AZZARO
PARIS

BALENCIAGA
PARIS



paco rabanne
PARIS

Jean Paul
GAULTIER

Christian Dior
PARFUMS

DAVIDOFF
PARFUMS

NINA RICCI
PARIS

SERGE LUTENS

Thierry Mugler

Chopard

Chloé

ISSEY MIYAKE

GUERLAIN
PARIS



GIVENCHY

CERRUTI 1881

roberto cavalli

PRADA

narciso rodriguez

SWAROVSKI

MARC JACOBS

VALENTINO

ELIE SAAB

KENZO

LAMPE
BERGER
PARIS

Lolita Parfums
Lempicka
Paris

CARON
PARIS

natura
bem estar bem

CHANEL

sisley PARIS GROUPE CLARINS

EXPANSCIENCE[®]
LABORATOIRES

Johnson & Johnson
GROUP OF CONSUMER COMPANIES

ALES
GROUPE

YVES ROCHER

CAUDALÍE PARIS URIAGE
EAU THERMALE

Mustela[®]

ROC

LIERAC
PARIS

DANIEL JOUVANCE
EXPERTISE COSMÉTIQUE MARINE

Noviderm

Neutrogena

PHYTO
PARIS

Dr. PIERRE RICAUD
PARIS BIOLOGIE & BEAUTÉ

NUXE
PARIS

dermo active
cosmétologie
SVR

Johnson & Johnson
GROUP OF CONSUMER COMPANIES

P&G

L'ORÉAL[®]

Reckitt
Benckiser

LE PETIT
MARSEILLAIS

head & shoulders

PANTENE
PRO-V

GEMEY
PARIS
MAYBELLINE
NEW YORK

Veet

GARNIER

Clearasil

COSMETIC VALLEY IN ACTIONS



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CREATED IN 1994 AND RECOGNIZED AS A FRENCH COMPETITIVENESS CLUSTER IN 2005, COSMETIC VALLEY ASSOCIATION AIMS TO DEVELOP COMPETITIVENESS OF COSMETIC INDUSTRY IN FRANCE

- **Initiate and promote R&I** devoted to cosmetics
 - Scientific Intelligence services
 - Networking - Cross fertilization between public and private labs
 - Collaborative projects engineering
 - Organization of scientific congresses
- **Support commercialisation / Export**
 - Participation to international trade fairs
- **Develop training** for cosmetics
 - Anticipate the needs and propose up to date training programs

Test and Measure: An Issue for Cosmetics

INNOVATION IN COSMETICS

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Legislative
pressure



3 major axes of innovation

New ingredients

- Active ingredients
 - Peptides, Natural extracts, ...
- Texture ingredients
 - Polysaccharides, lipids, ...

New formulations

- Nanoemulsions, Pickering emulsions
- Microcapsules

New packaging

- New materials
- Design, Coatings

Consumer
expectations



Testing is a key for innovation and market access

- Knowledge of the skin and other external tissues (hairs, nails, ...)
- Characterization of the physicochemical properties of the products (CCI, Nanos, ...)
- Development of in-vitro alternative models to animal testing (toxicity, eco-toxicity)
- Clinical demonstration of allegations.

Focus on Legislative pressure

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REACH
EU Cosmetics Regulation

Legislative
pressure



REACH : Substances used in the formulation of cosmetic products are covered by REACH.

EU Cosmetics Regulation : Agreed in March 2009, applicable in July 2013 in France, this regulation will replace the Directive with

- A strengthened market surveillance : EU-wide registering system, a responsible person designated for each product on the market, ...
- Compulsory labeling and safety assessment of nanomaterials
 - Notification 6 months prior being placed on the market,
 - Labeling on the packaging : Titanium dioxide [nano]
- Stricter rules on CMR substances (basically forbidden) and criteria to be defined regarding endocrine-disrupting properties
- Ban on animal testing
- Etc.

Focus on Consumer expectations

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“Natural products”
Cosmeceuticals
Multifunctional

Cosmetic Market is worldwide. Thus cosmetic industry must meet each consumer needs which rely on

- Intime knowledge of skin and hair’s characteristics, biophysics, biology, and physiology
- Deep knowledge of beauty rituals, cultural habits, gestures, food, climate

Example : pigmentation of skin

“Lustrous black hair and impossibly white, porcelain skin mark the struggle of the narrow ideals of Asian beauty”

Source : *Marie Claire*, May 2012



Major trends

- “**Natural**” : Alternative to petro chemistry
- **Cosmeceuticals** : “Active” cosmetics, even customized one
- **Multifunctional** : eg new materials both for skin care and make up

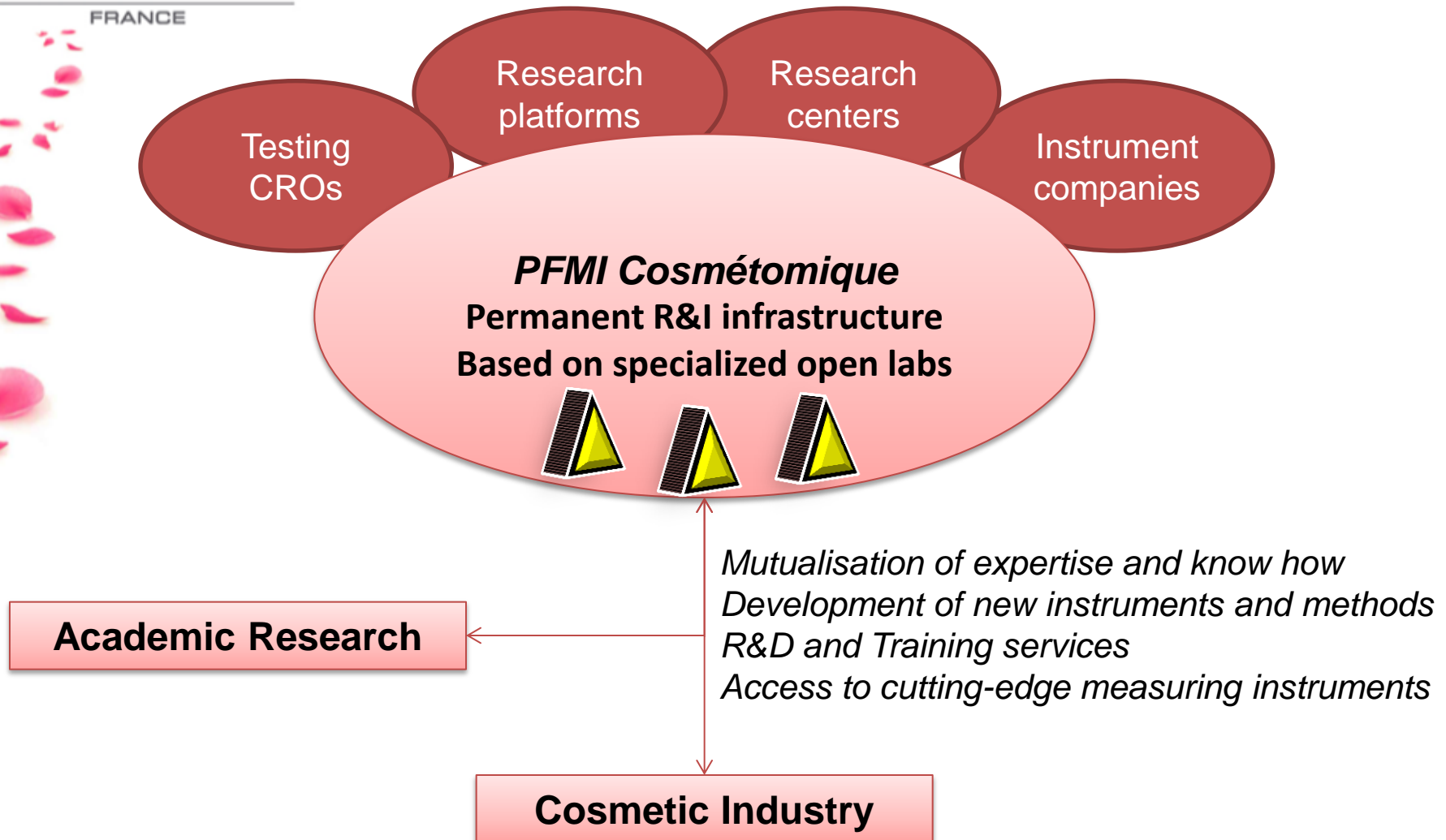
ON GOING R&I PROGRAMS (EXAMPLES)

- **EPACA** : skin ageing study through in vitro testing and clinical skin imaging (ultrasound) both on asian and caucasian skin.
 - Collaborative project supported by French government (FUI)
 - 3 academic partners, 3 companies - 4 M€, 3 years
- **Nano+** : development of new equipments to analyse nanoparticles in cosmetic products (laser granulometry).
 - Collaborative project supported by French government (FUI)
 - 3 academic partners, 4 companies - 2,4 M€, 3 years
- **RHEACTIF** : viscoelastic characterization of industrial fluids using acoustical rheology. Application to cosmetics.
 - Collaborative project supported by French government (FUI)
 - 3 academic partners, 1 industry - 0,7 M€, 3 years

**Collaborative programs have been initiated but
there is no structure devoted to cosmetics R&I challenges**

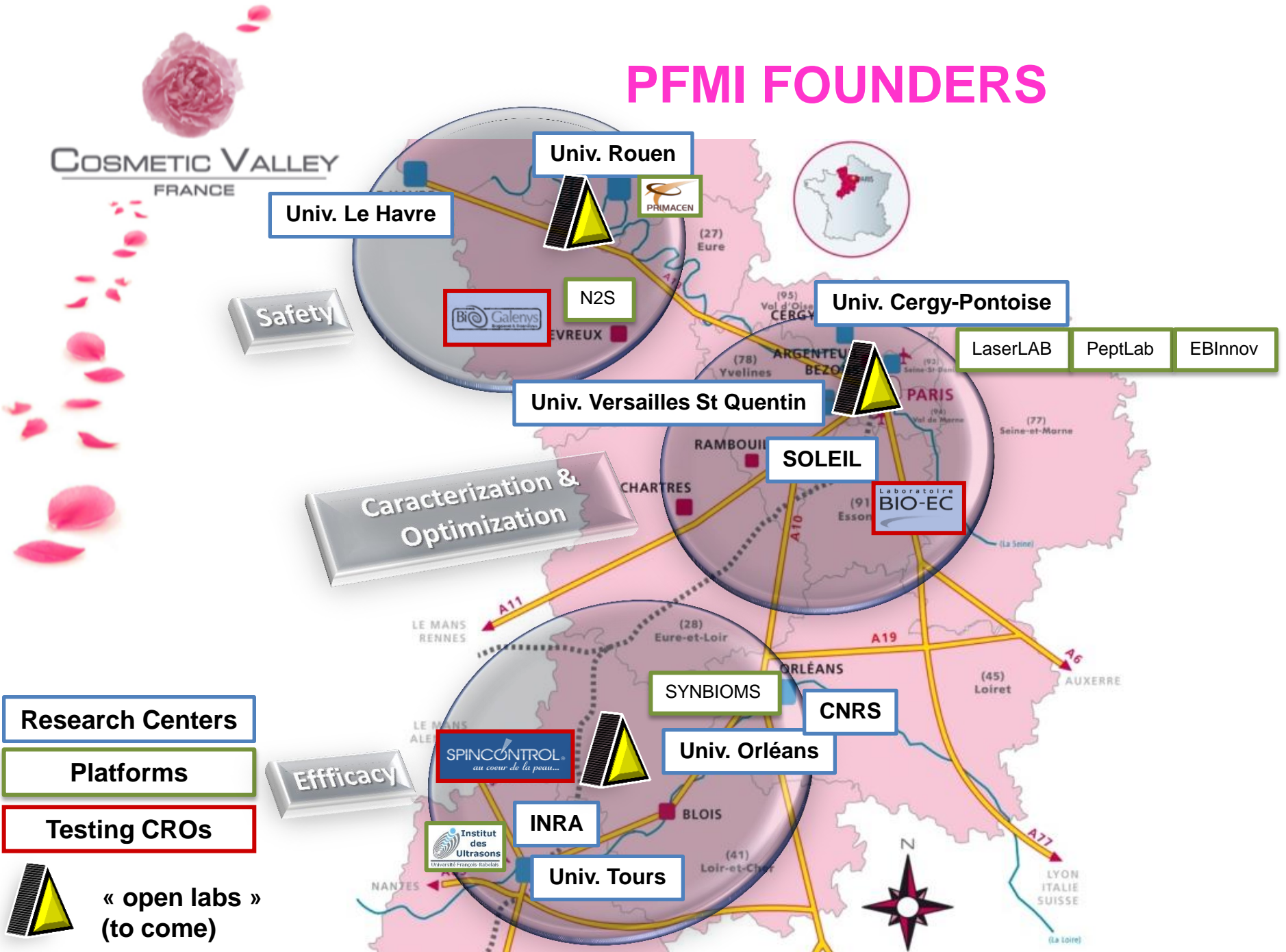
PFMI Cosmétomique : the first permanent infrastructure devoted to cosmetics

PFMI OVERVIEW



PFMI FOUNDERS

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PFMI RESEARCH AXES

- Safety :
 - Alternative Toxicology and Ecotoxicology
 - Microbiology
 - Container - Content interactions



- Characterization & Optimization
 - Multimodal and Multiscale Testing
 - Ex vivo Testing
 - Physico-chemical characterization
- Efficacy
 - In vitro testing
 - Imaging and Dermatology (clinical trials)
 - Sensory evaluation

First Open lab (June 2013)

**Characterization, Optimization
of Products and Diagnostic on
Different Scales**



UNIVERSITÉ
de Cergy-Pontoise



FOCUS ON THE FIRST OPEN LAB

Characterization, Optimisation of Products
and Diagnostic on Different Scales



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SOLEIL
SYNCHROTRON
Selected beamlines



UNIVERSITÉ
de Cergy-Pontoise
Laserlab, Peptlab



Laboratoire
BIO-EC

- Partners facilities and expertise
 - Structure and stability of emulsions study (eg Diffusion/X-diffraction)
 - Analysis of the molecular structure of tissues (eg FT-IR imagery)
 - Monitoring after application of products (eg Raman Spectroscopy)
 - Safety and efficacy testing on human skin (eg Histological studies)
 - Etc.
- Major research topics
 - Multimodal and Multiscale testing
 - Non-destructive testing (NDT)
 - Skin imaging
 - Molecular diagnosis
 - Biomarkers identification

2013 :
Collaborative R&D
programs to be started

Merci de votre attention

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