

# Space for Regional Best Practices An Introduction

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# ***EU Space Programmes & Research***

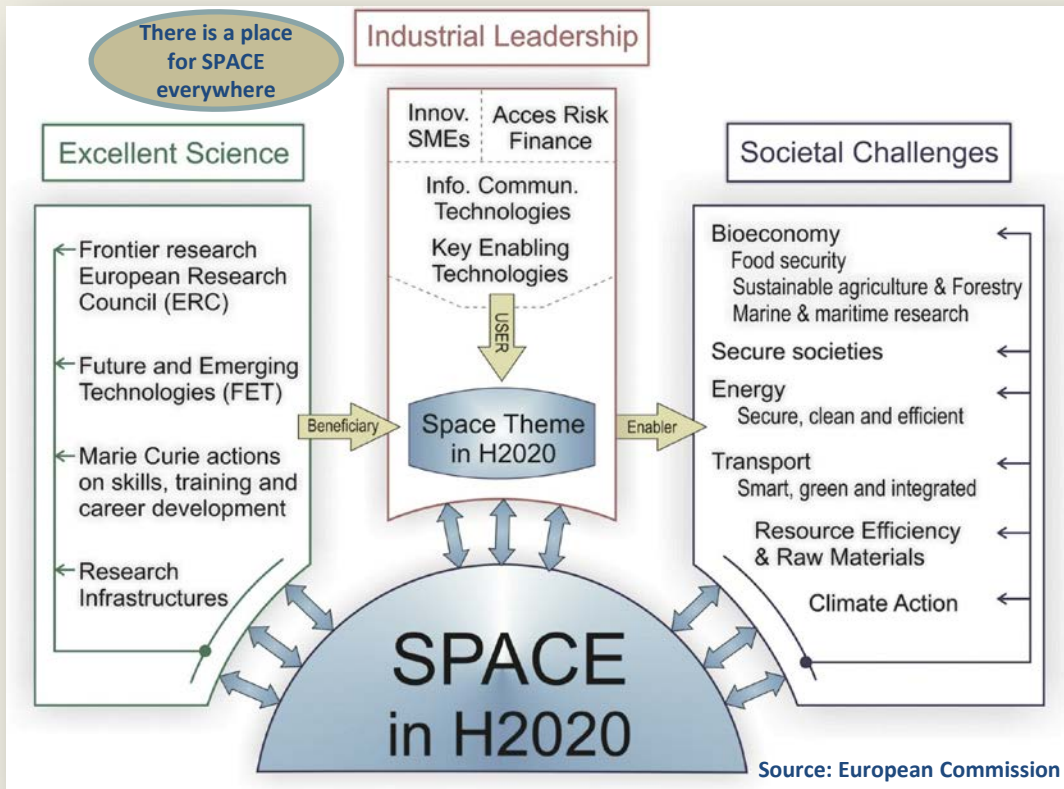
***“Prepare for the increasing role of space in the future and reap the benefits of space now”***



**HORIZON 2020**

# Space in H2020

The specific objectives of space R&I are to **foster a competitive and innovative space industry and research community** and to **develop and exploit space infrastructures**, in order to meet **future Union policy and societal needs**.



## Financial Resources

Horizon 2020 ≈ € 1.400 M

+Copernicus ≈ € 3.800 M

+Galileo ≈ € 6.300 M

≈ €12.000 M



# Objectives of EU Space Research

## 4 objectives for Space in H2020:

1. Enhance **competitiveness, non-dependence, and innovation** of EU space sector  
to maintain a globally leading role in space by safeguarding and developing a competitive space industry and research community and by fostering space-based innovation
  2. Enable advances in **space technologies**  
to ensure the capability to access space and to operate space systems to the benefit of European society in the next decades
  3. Increase **exploitation of space data**  
to ensure more extensive utilisation of space data from existing and future European missions in the scientific, public and commercial domain
  4. Enable participation in **international space partnerships**  
to support the European research and innovation contribution to long term international space partnerships
- + relevant **space applications** under Societal Challenges:  
Transport, Climate, Security,...



# Structure of the H2020 Space Work Programme\*

## LEIT Leadership in Enabling Industrial Technologies

€ 144 M

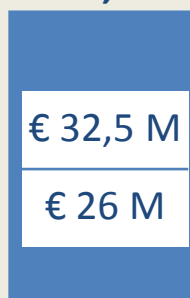


**Galileo**  
Satellite  
Navigation

A "two year" work programme (2014-2015):

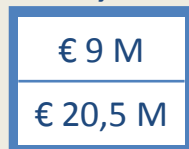
- 2015 "indicative" at this stage – final decision in 2014
- Call deadlines March-April 2014 and end of 2014

€ 58,5 M



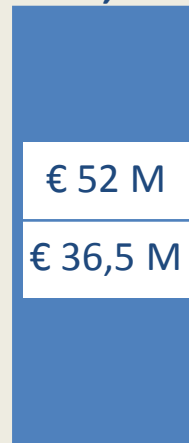
**Earth**  
**Observation**  
**(EO)**

€ 29,5 M



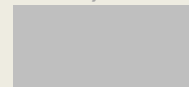
**Protec-**  
tion of European  
assets in and from  
Space

€ 88,5 M



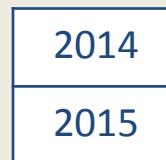
**Compet-**  
itiveness of the  
European Space  
Sector:  
Technology &  
Science

€ 17,25 M



**SME**  
**Instrument**

**Key:**



€ 9,25 M



**Other**  
**actions**

\*Publication: 11 December 2013

<http://ec.europa.eu/research/participants/portal>

Source: European Commission



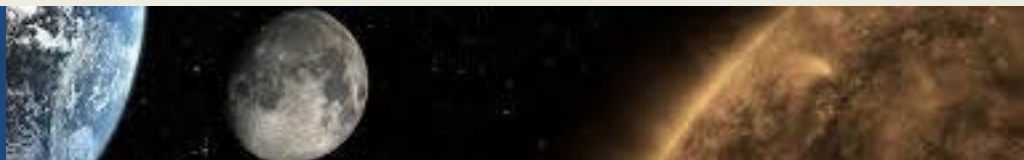
# H2020 Open Calls for Space Proposals - 2014

Call	Budget	Programs	Type	Deadline
EO-2014 Earth Observation	€ 21,500,000	New ideas for Earth-relevant space applications	Research and Innovation	26.3.2014
		Climate Change relevant space-based Data reprocessing and calibration	Research and Innovation	26.3.2014
		Observation capacity mapping and needs for Climate change monitoring	Research and Innovation	26.3.2014
COMPET-2014 Competitiveness of the European Space Sector: Technology and Science	€ 52,000,000	Technologies for European non-dependence and competitiveness	Research and Innovation	26.3.2014
		Independent access to space	Research and Innovation	26.3.2014
		In-Space electrical propulsion and station keeping	Coordination and support actions	26.3.2014
		Space Robotics Technologies	Coordination and support actions	26.3.2014
		In-Orbit demonstration/Validation (IOD/IOV)	Coordination and support actions	26.3.2014
		Bottom-up space technologies at low TRL	Research and Innovation	26.3.2014
		Space exploration – Life support	Research and innovation	26.3.2014
		Science in context: sample curation facility and scientific exploitation of data from Mars missions	Research and innovation	26.3.2014
		Technology “demonstrator projects” for exploration	Coordination and support actions	26.3.2014
		Outreach through education	Coordination and support actions	26.3.2014
PROTEC-2014 Protection of European Assets in and from Space	€ 8,000,000	Space Weather	Research and Innovation	26.3.2014
		Access technologies and characterisation for Near Earth Objects (NEOs)	Research and Innovation	26.3.2014
GALILEO-2014 Applications in Satellite Navigation - Galileo	€ 38,000,000	EGNSS applications	Innovation Actions	3.4.2014
		Small and Medium Enterprise (SME) based EGNSS applications	Innovation Actions	3.4.2014
		Releasing the potential of EGNSS applications through international cooperation	Innovation Actions	3.4.2014
		EGNSS awareness raising, capacity building and/or promotion activities, inside or outside of the European Union	Coordination and support actions	3.4.2014

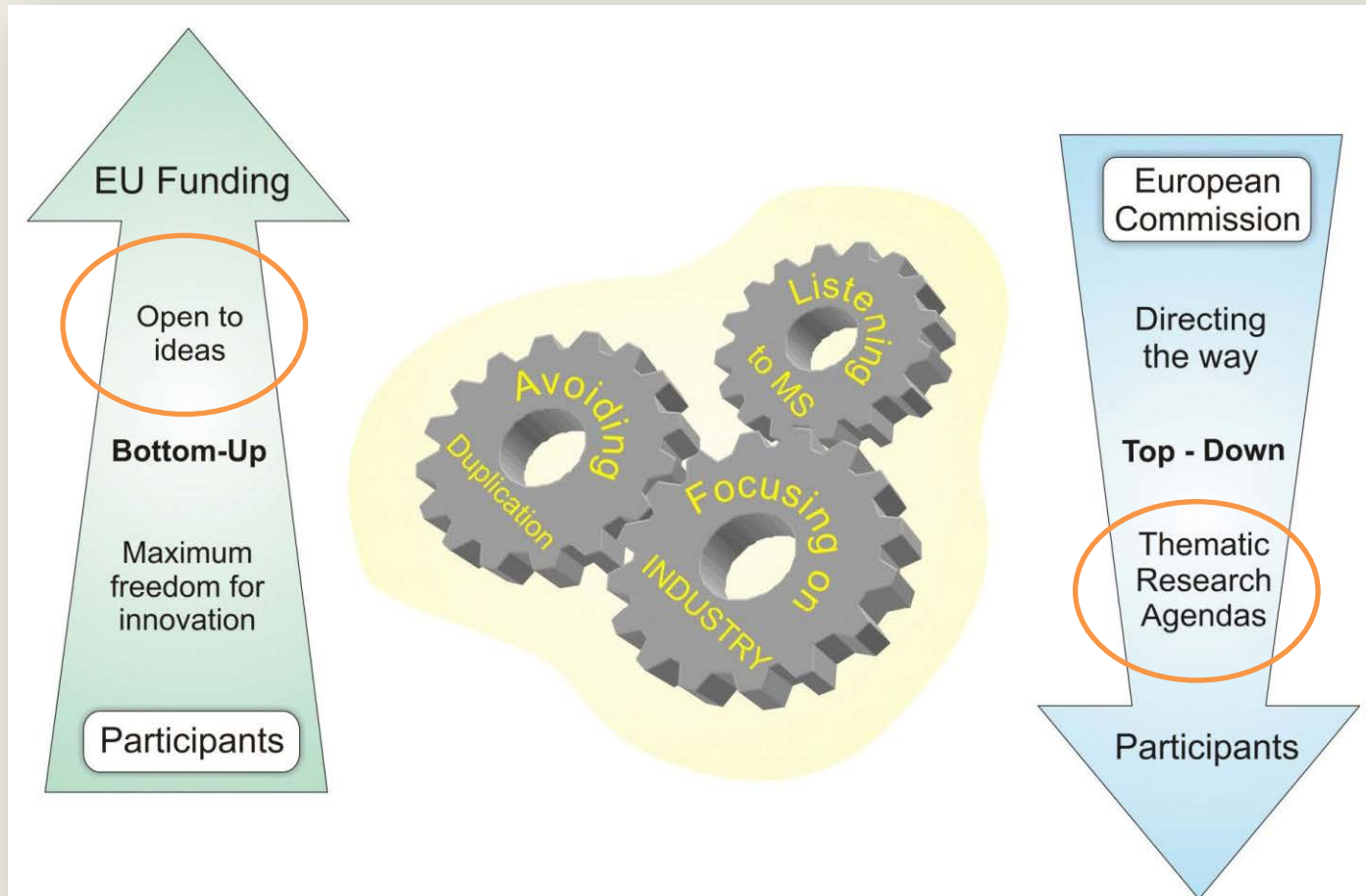


# H2020 Open Calls for Space Proposals - 2015

Call	Budget	Programs	Type	Deadline
EO-2015 Earth Observation	€ 26,000,000	Bringing EO applications to the market	Innovation actions	27.11.2014
		Stimulating science use of Copernicus Sentinel Data	Research and Innovation	27.11.2014
		Technology developments for competitive imaging from space	Research and Innovation	27.11.2014
COMPET-2015 Competitiveness of the European Space Sector: Technology and Science-2015	€ 36,500,000	Technologies for European non-dependence and competitiveness	Research and Innovation	27.11.2014
		Independent access to space	Research and innovation actions	27.11.2014
		Bottom-up space technologies at low TRL	Research and innovation actions	27.11.2014
		Space exploration – Habitat management	Research and innovation actions	27.11.2014
		International cooperation in space science	Research and innovation actions	27.11.2014
		Scientific exploitation of astrophysics and comets data	Research and innovation actions	27.11.2014
PROTEC-2015 Protection of European assets in and from space	€ 6,500,000	Passive means to reduce the impact of Space Debris	Research and Innovation	27.11.2014
GALILEO-2015 Applications in Satellite Navigation-Galileo	€ 25,000,000	Small and Medium Enterprise (SME) based EGNSS applications	Innovation Actions	04.02.2015
		EGNSS applications	Innovation Actions	04.02.2015
		Releasing the potential of EGNSS applications through international cooperation	Innovation Actions	04.02.2015
SME Instrument Call			Research and innovation/ innovation actions	2014/15



# The H2020 Space approach

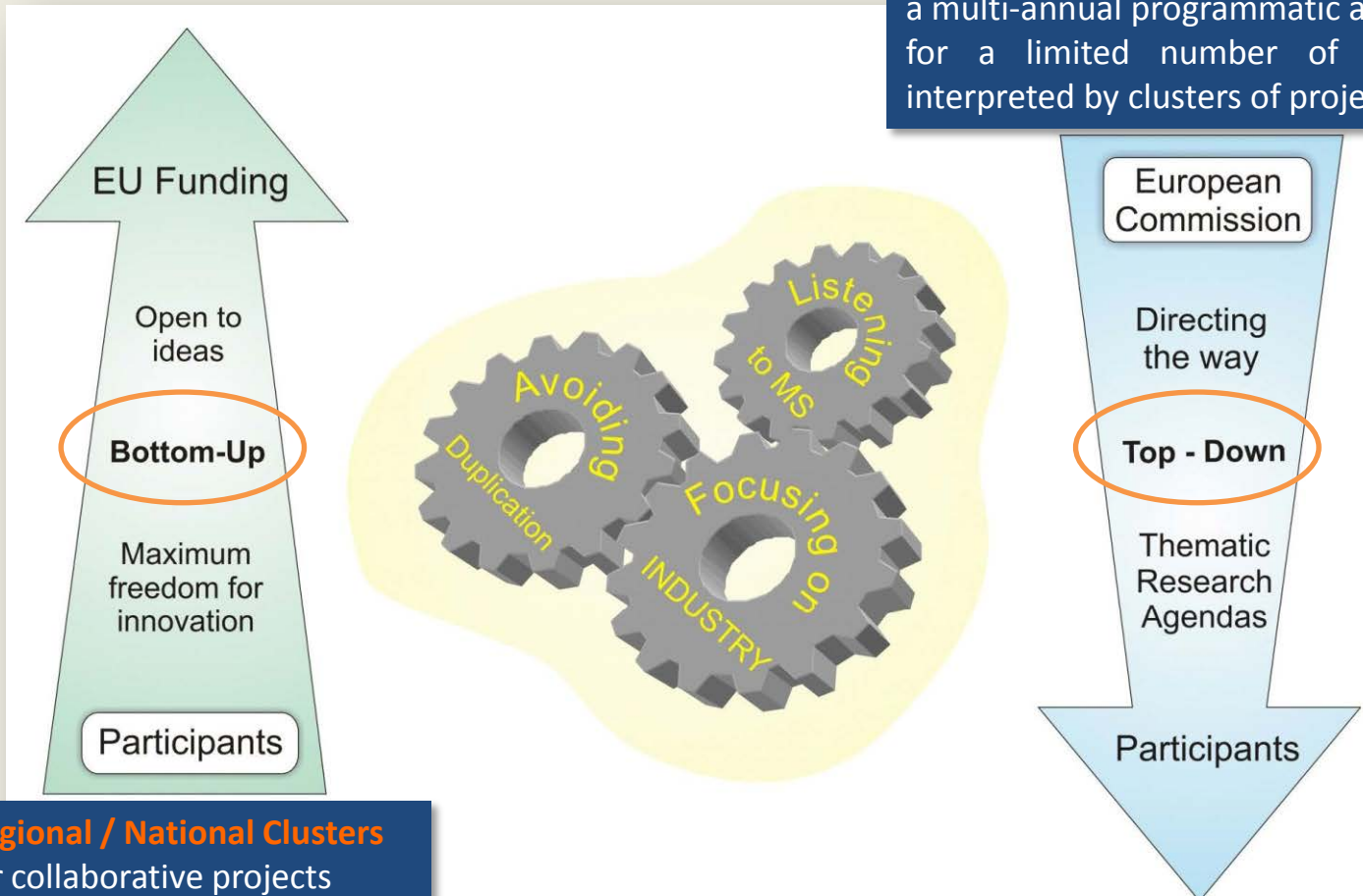




# The “cluster” in H2020 Space approach

## Strategic Research Clusters (SRC)

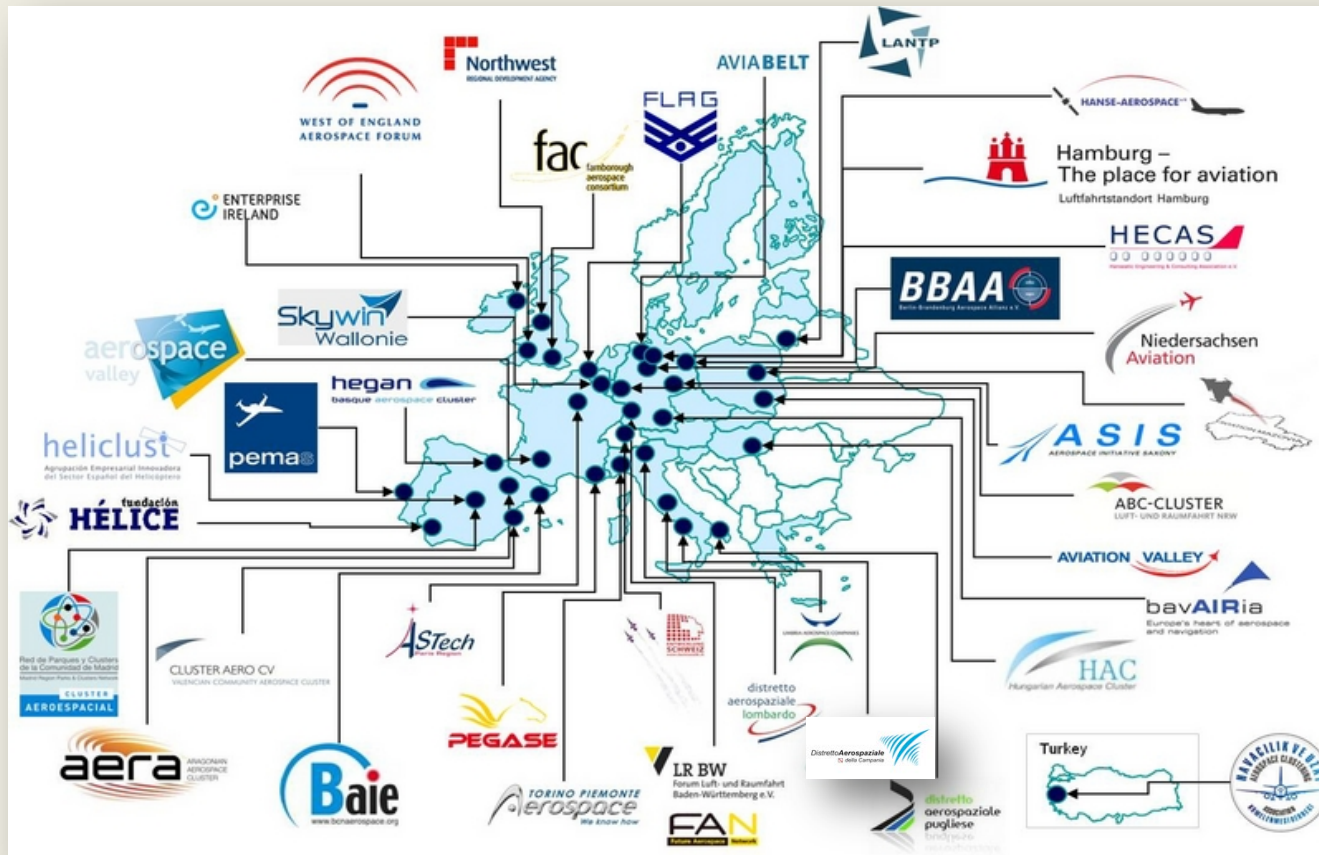
a multi-annual programmatic approach for a limited number of themes, interpreted by clusters of projects



**Regional / National Clusters**  
for collaborative projects



# The main aerospace clusters in Europe: a wide opportunity for international collaboration



# The Italian experience: from industrial districts to the national cluster

Since 1960

Since 2002

Since 2012

## Industrial Districts

*“the concentration of specialized industries in particular localities”*

## Technological Districts

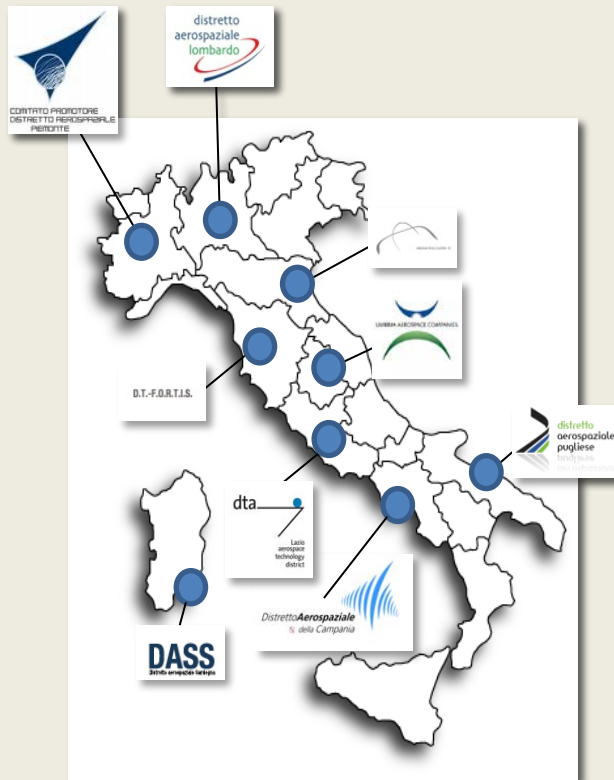
*“geographic (regional) concentration of people, companies, universities, research centers and institutions collaborating and competing in a specific field with high technological content”*

## National Clusters

*“Organized aggregations of existing Industrial and Technological Districts, other companies, universities, research institutions, present in different geographical areas, focused on a specific field of application, likely to contribute to the international competitiveness of both the territories of reference and the national economic system”*



# The Italian aerospace national cluster



**9 Local clusters, 10 large businesses, 125 SMEs (5 Consortia), 11 Universities and research centres, ASI, Spin-IT, ACARE.**

## WHAT

- Strengthening the Italian leading role in the enabling technologies for aerospace

## HOW

- Producing a Strategic Research Agenda, identifying needs and priorities
- Promoting technological complementarity and matching between application domains and technological streams
- **Matching national and international platforms (ACARE, Spin-IT)**
- Driving lifeblood from local clusters
- **Promoting international projects and initiatives in which the Italian space community can successfully contribute**
- Avoiding any investment overlapping between the regional and the national level



# Space for regional best practices

- Space is a **global activity**, both for the application fields and for the industrial value chain
- Space activities are **of growing interest for Regions** (European Commission Communication no. 108/2013)
- As space projects can effectively promote R&I within national and **regional Smart Specialization Strategies**, local authorities can play a **fundamental role in increasing space industry competitiveness**:
  - Industrial policy supporting SMEs' adoption of user-driven innovation
  - Actions for the aggregation of demand
  - Policies for education, training, long-life education of space engineers and technicians
  - Within the local Research & Innovation System, promotion of the participation in H2020 Calls and multi-annual Strategic Research Clusters



Thank you for your kind attention.

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