



“From the wisdom of the ages  
to the challenges of modern world”

**FIG WORKING WEEK**  
**17-21 MAY SOFIA BULGARIA** 2015

Organised by:   CHAMBER OF GRADUATED SURVEYORS

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 **Associazione Geometri Italiani Topografi**

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Italian situation



international proposal

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### the market situation in Italy

- Sales growing
- Almost all means below 25 Kg
- Market divided between Italian and foreign producers

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### the market situation in Italy

#### Italian offer UAV

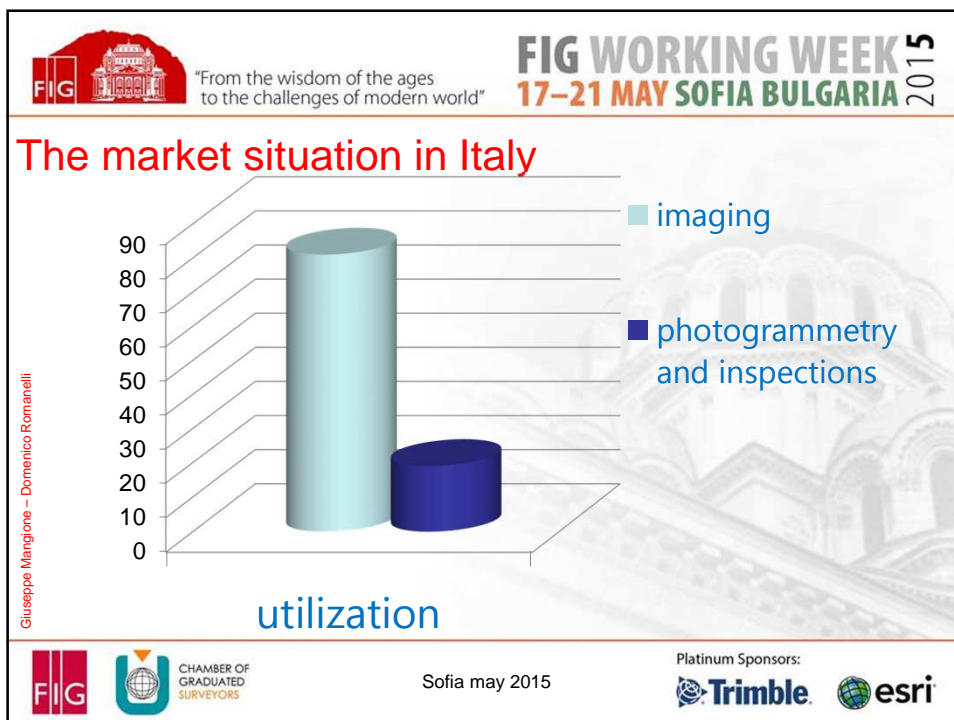
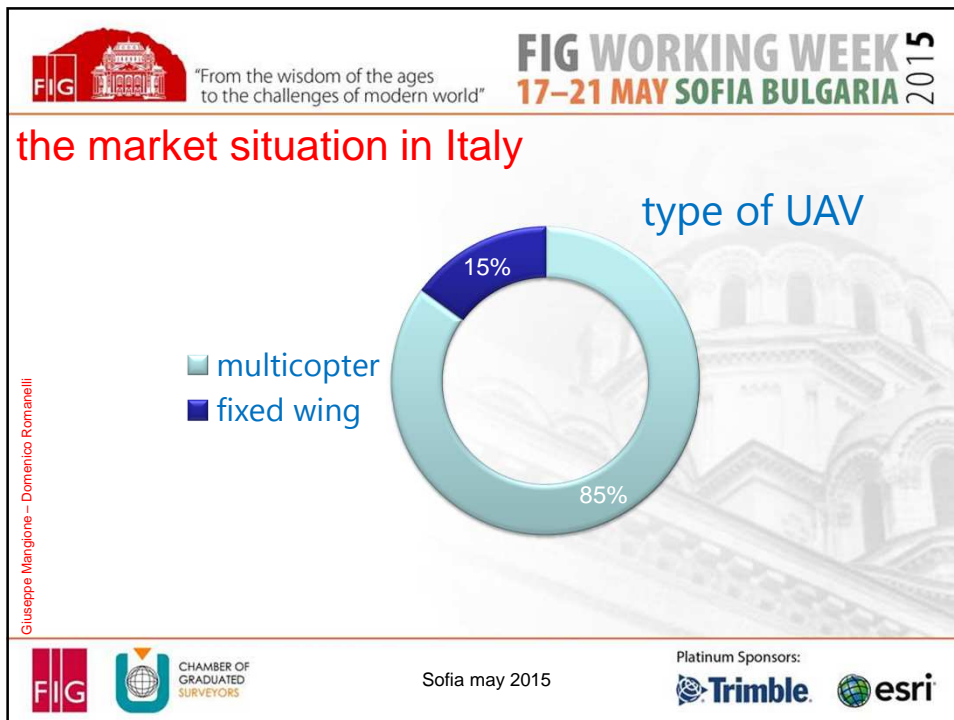
Category	Percentage
assemblers	97%
manufacturers	3%

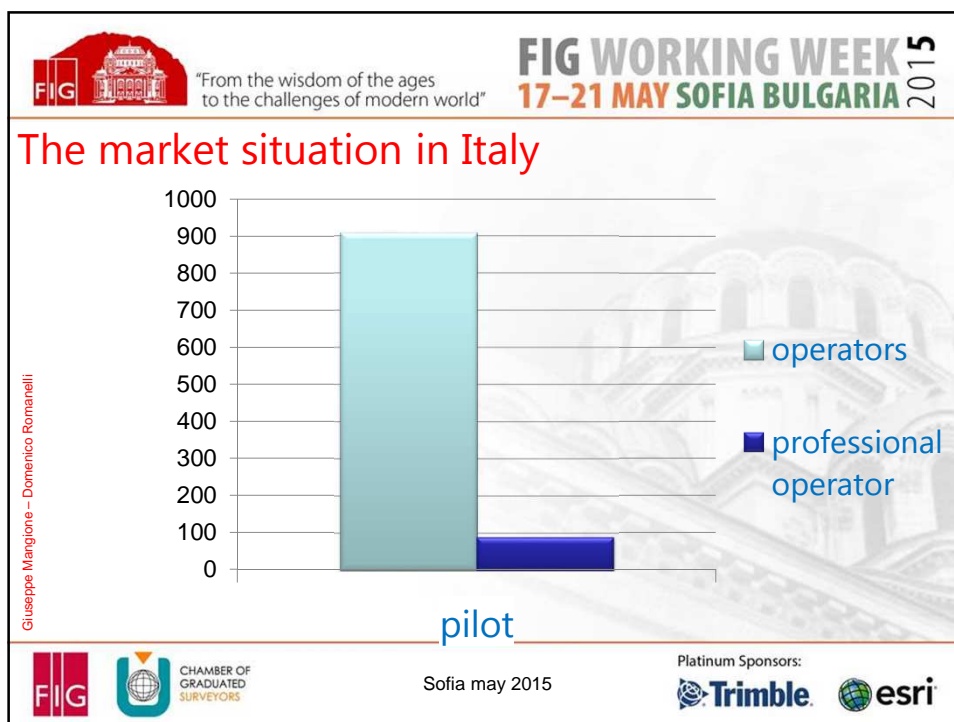
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## Training


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- Flight schools theoretical : **aeroclub**
- Flight schools practices: **manufacturers**
- Photogrammetry from UAV: **CNG, GEOWEB, AGIT**
- General information: **exhibitions, AGIT, geomedia, dronitaly, romadrone**

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**rule book ENAC**


take-off mass < 25 Kg	take-off mass > 25Kg
<ul style="list-style-type: none"> <li>used by Surveyors</li> </ul>	<ul style="list-style-type: none"> <li>non-technical operations</li> </ul>

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**rule book ENAC**


critical operations	NOT critical operations
<ul style="list-style-type: none"> <li>congested areas</li> <li>gatherings of people</li> <li>conurbations</li> <li>critical infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>all those non-critical</li> <li>rural areas</li> <li>Without gatherings of people</li> </ul>

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**authorization critical operations**

- necessary authorization ENAC
- to present specific question

**Statement NOT critical operations**

- declaration by the air company on ENAC website with certification of the observation of rule book



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**Pilot**

- flight school theoretical
- flight activity experimental practice
- recognizable by jacket
- report any accidents to ENAC



**UAV**

- Plate on UAV and remote control
- verification systems, flight altitude and rules of the air
- It must be ensured

**ORGANIZATION**

- technical organization and adequate working
- Flight Manual
- manuals of operations and procedures
- type of operation
- risk analysis



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**rule book ENAC**

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Visual flight requirements	Not visual flight requirements
<ul style="list-style-type: none"> <li>• max 400 feet</li> <li>• max 3 km from airport</li> <li>• during the day with visual</li> <li>• at least 50 m by persons</li> </ul>	<ul style="list-style-type: none"> <li>• only with specific authorization by ENAC</li> </ul>

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**rule book ENAC**


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**Operations with UAV with maximum mass  $\leq 2$  Kg**

- design and construction has qualities of harmlessness
- All areas are considered not critical
- overflight prohibited gatherings people, parades, sporting events, forms of entertainment, etc.

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## Italian producers


- Hardware : fixed wing and multicopter
- SOFTWARE: specialized
- SOFTWARE: photogrammetry


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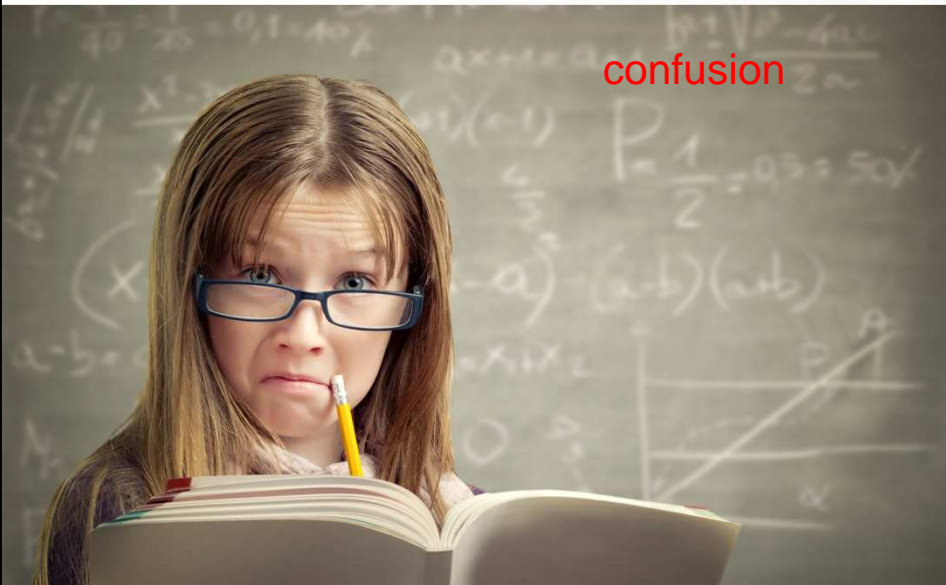



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confusion





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### the confusion

- Rule book by ENAC being updated
- Economic investment and training important
- Private clients uninformed
- Government entity without the specific specifications
- Italian authorization valid abroad?

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### what would the Italian surveyors

- rigid rules but feasible
- opportunity to work abroad
- clear training and qualifying
- unified specifications and international





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**proposal to grow**



- common international rules
- same specifications for the nations belonging to the FIG

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