Analysis of the production of photonics manufacturing and services to the photonics industry on the national territory

June - 2020
Mapping of the French photonics industry

Perimeter of the base

The database includes companies that:
- Manufacture photonic components, industrial equipment for the manufacture of these components, modules and photonic systems,
- Manufacture complete systems fulfilling functions based on photonics (detection, imaging, lighting, machining, etc.).
- Providing services related to the development of the photonics industry (design office, engineering, modelling and software, tertiary functions)
- Distributing photonic components and systems for regional markets (France, French speaking, EMEA, Europe)

The database does not include:
- Integrators who develop non-photonic systems (automotive, household appliances) even if they integrate photonic subsystems (automotive headlight, LEDs for baking ovens)
- The research centres have no commercial activity (contracts) and no labour force.
Mapping of the French photonics industry

2018 figures

1,051 companies

773 industrial

115 services and software publishers

163 foreign Repr. and distributors

18,59 Billions of euros

Of which €14.71bn in the manufacturing branch

73,000 jobs

On the territory

Jobs in university research are not mainstreamed

www.photonics-france.org
Performance of the French photonics industry

A remarkable evolution between 2013 and 2018

**Turnover:** + 40%  
(6 times more important than the growth of manufacturing industry)

**Job:** + 12%  
(weak employment growth in all other industries)

**Number of industrial companies:**  
+ 4.5% of annual growth

Agile but not fragile

**World Market**  
(Photonics21 figures)  
- 2005: 228 billions €  
- 2015: 447 billions €  
- 2020: 615 billions €  
+38% between 2015 and 2020
Detailed analysis of the French sector

Summary

1. Evolution 2013 – 2018
   Evolution of growth
   Employment trends
   Trends in business start-ups
   Changes in companies size

2. The markets in figures
Advantages of the French photonics sector

Growth in value well in excess of domestic industry growth

The 40.4 point growth in the photonics sector between 2013 and 2018 represents almost 6 times the growth in French manufacturing industry (7.12 points between 2013 and 2018) and almost 2 times the growth in freight transport (23 points between 2013 and 2018).
Advantages of the French photonics sector

Growth that creates jobs

12.3 percentage points of labour force growth between 2013 and 2018 (65,000 to 73,000) compared to zero employment growth in all industries.

Field: France, manufacturing industry sector.
Source: INSEE, employment estimates, 4=quarterly average, seasonally adjusted data.
Advantages of the French photonics sector

Dynamic business demographics

The latest data is for the three-year period from 2016 to 2018.
A forecast covering the entire period (2019 and 2020) is highlighted in yellow.
Advantages of the French photonics sector

Agile but not fragile companies

Distribution of industrial employment - 2018

33% of photonics companies have between 20 and 100 employees compared to 13% in the industry as a whole.
The strengths of the French photonics industry

Driving markets and a "photonic core".

<table>
<thead>
<tr>
<th>SEGMENTS</th>
<th>Turnover (€)</th>
<th>Turnover/staff (€)</th>
<th>Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photonics (basic components and materials)</td>
<td>2,524,549,000</td>
<td>215,000</td>
<td>11,741</td>
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<tr>
<td>Mobility: automotive, maritime, railway, aeronautics</td>
<td>638,697,000</td>
<td>205,000</td>
<td>3,121</td>
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<td>The factory of the future</td>
<td>496,604,000</td>
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<td>Environment and energy (including lighting/building)</td>
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<td>Agriculture and food</td>
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<td>Health and well-being</td>
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<td>Telecommunication and quantum information</td>
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<td>Large Instruments and Space</td>
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<td>Professionals and consumers</td>
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<td>Optical Instrumentation and Measurements</td>
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<td>Services</td>
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<td>Distributors</td>
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<tr>
<td>Software</td>
<td>86,041,000</td>
<td>113,000</td>
<td>758</td>
</tr>
</tbody>
</table>
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