



Access Center for
Photonics Innovation Solutions
And Technology Support



**One-Stop-Shop
for
Supporting European Companies
driven by
their Photonics Innovation Needs**

especially adapted to the needs of SMEs



SMEs are the motor of Europe's economy

5k SMEs in Photonics

46k SMEs in High-Tech Manufacturing (HTM)

4.3m SMEs in Knowledge Intensive Sectors (KIS)



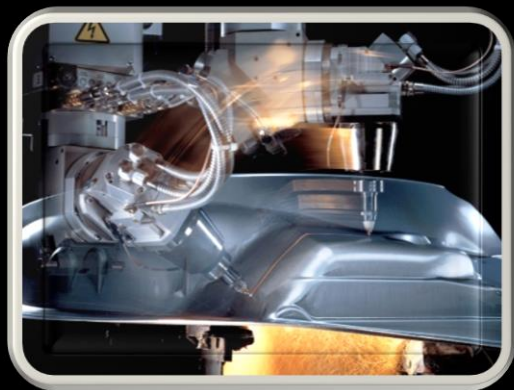
Optical Datacom



Photovoltaics



LED Lighting



Lasers in Manufacturing

PHOTONICS

great opportunities
to innovate
in a variety of sectors



Displays



Machine Vision



Medical Optics



Optical Components

Photonics innovation show-stoppers for companies

Human resources and expertise



in-house photonics experts and expertise are missing



supporting in-house photonics R&I is too expensive



identifying external experts is time-consuming and inefficient

Technology



in-house cutting-edge photonics technology is missing



investment risk is too high or financially irresponsible



multiple-step technology shopping fails partial solutions are often incompatible

ACTPHAST's INNOVATION ROADBLOCK REMOVERS



**dedicated task forces
with the best EU experts**



**supported by key
photonics technology platforms**



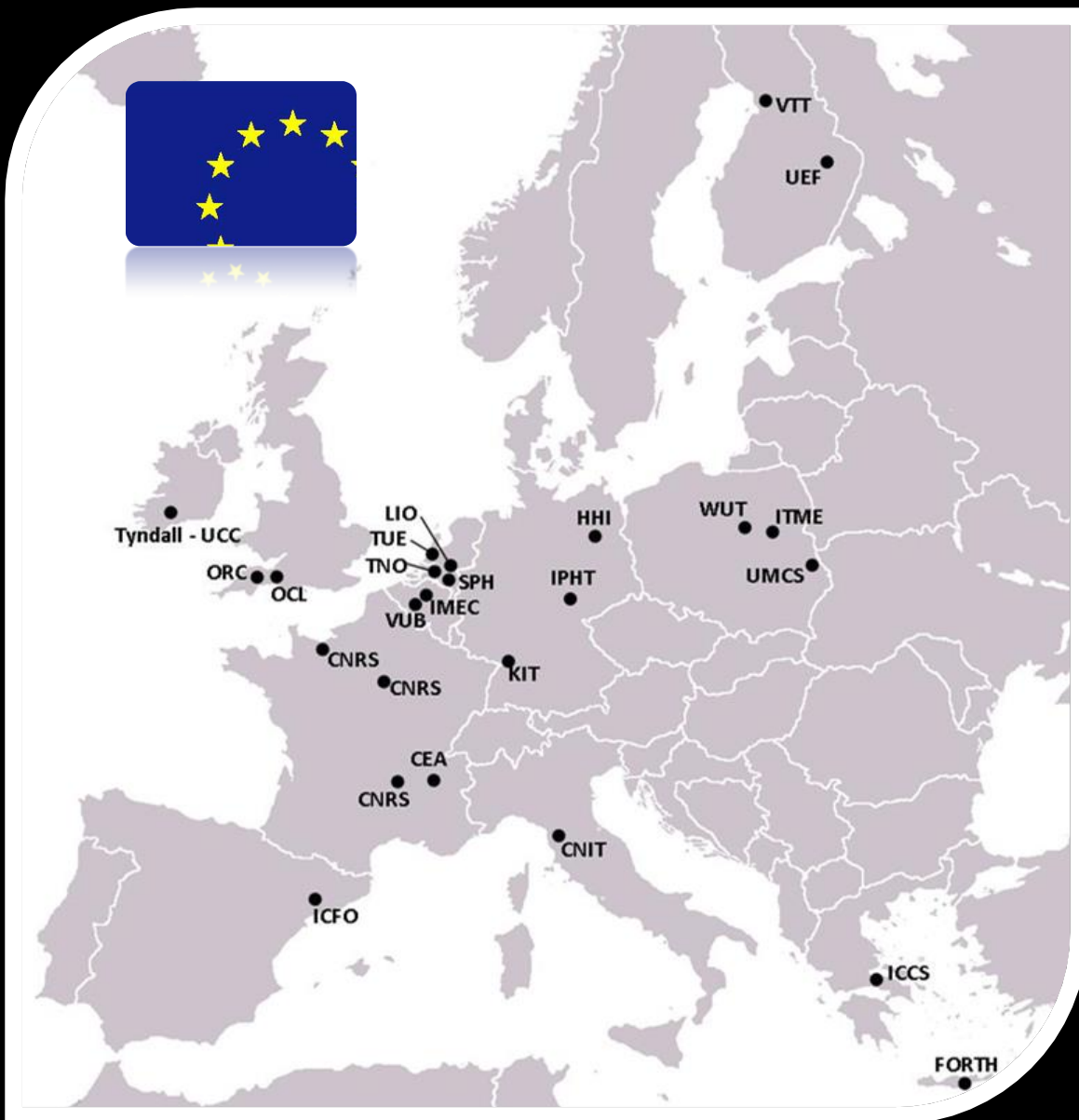
**photonics innovation support and services
that efficiently impact companies**

Based on 10 years of EU-wide NoE integration efforts and on “best practices” from SME access projects





**More than
200 top-experts
from 23 institutes
ready
to provide
innovation support
to industry**

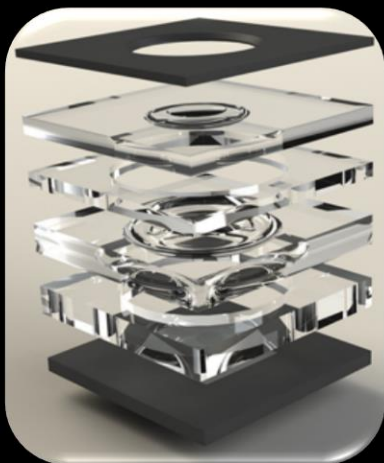




> 200 experts



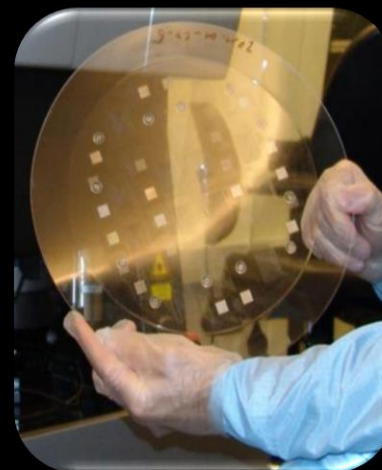
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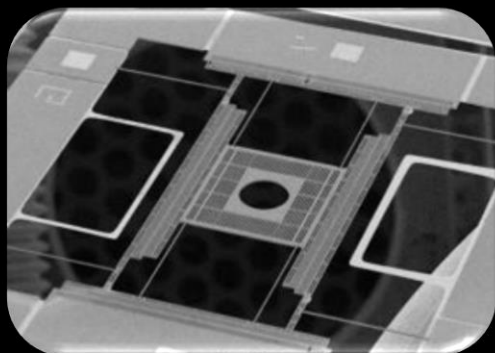
free-space optics



specialty fibers

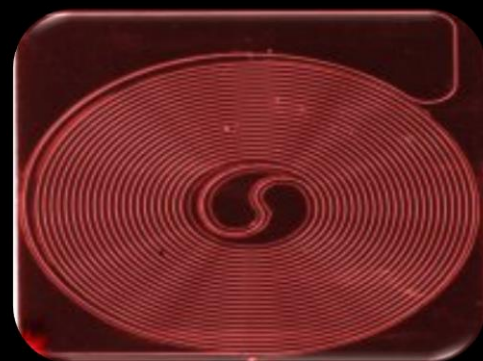


polymer-based optics

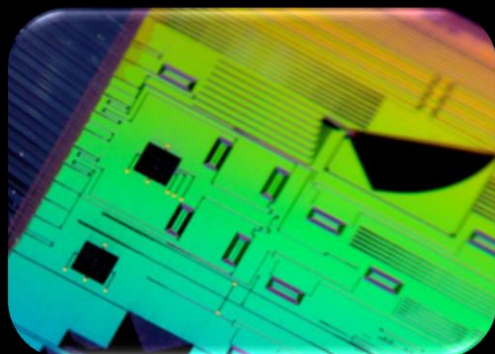


MOEMS

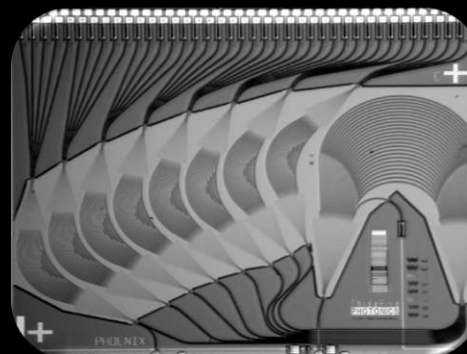
7 Technology Platforms



SiN-SiO PICs



Si -PICs



InP -PICs

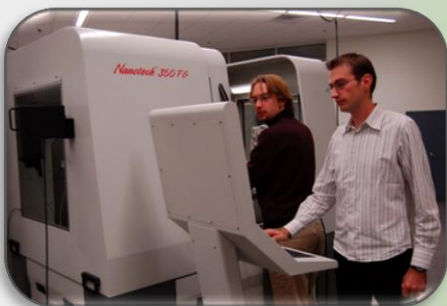
Each technology platform is capable of supporting a full supply-chain from design to demonstrator



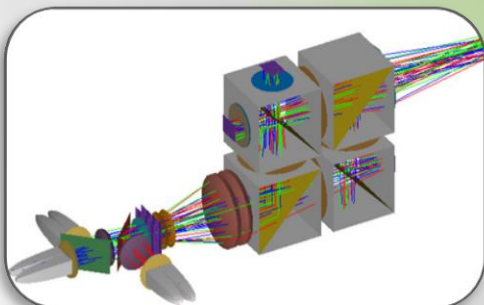
Optical Measurement and Characterization



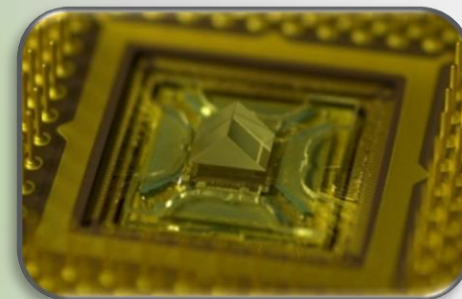
Low-Cost Low-Volume Manufacturing



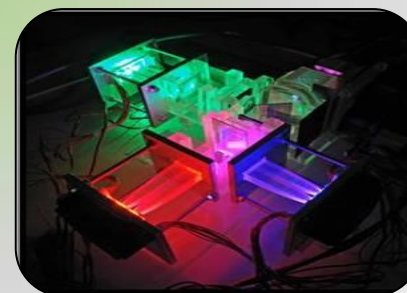
Mastering and Prototyping Technologies



Optical Modelling and Photonic Design



Packaging and Integration



Demonstrators and Prototypes

ACTPHAST's general support principles



**support innovation
driven by business needs**



**provide support
instead of funding**



**innovation instrument
dedicated to SMEs**



**support
a variety of industry sectors**



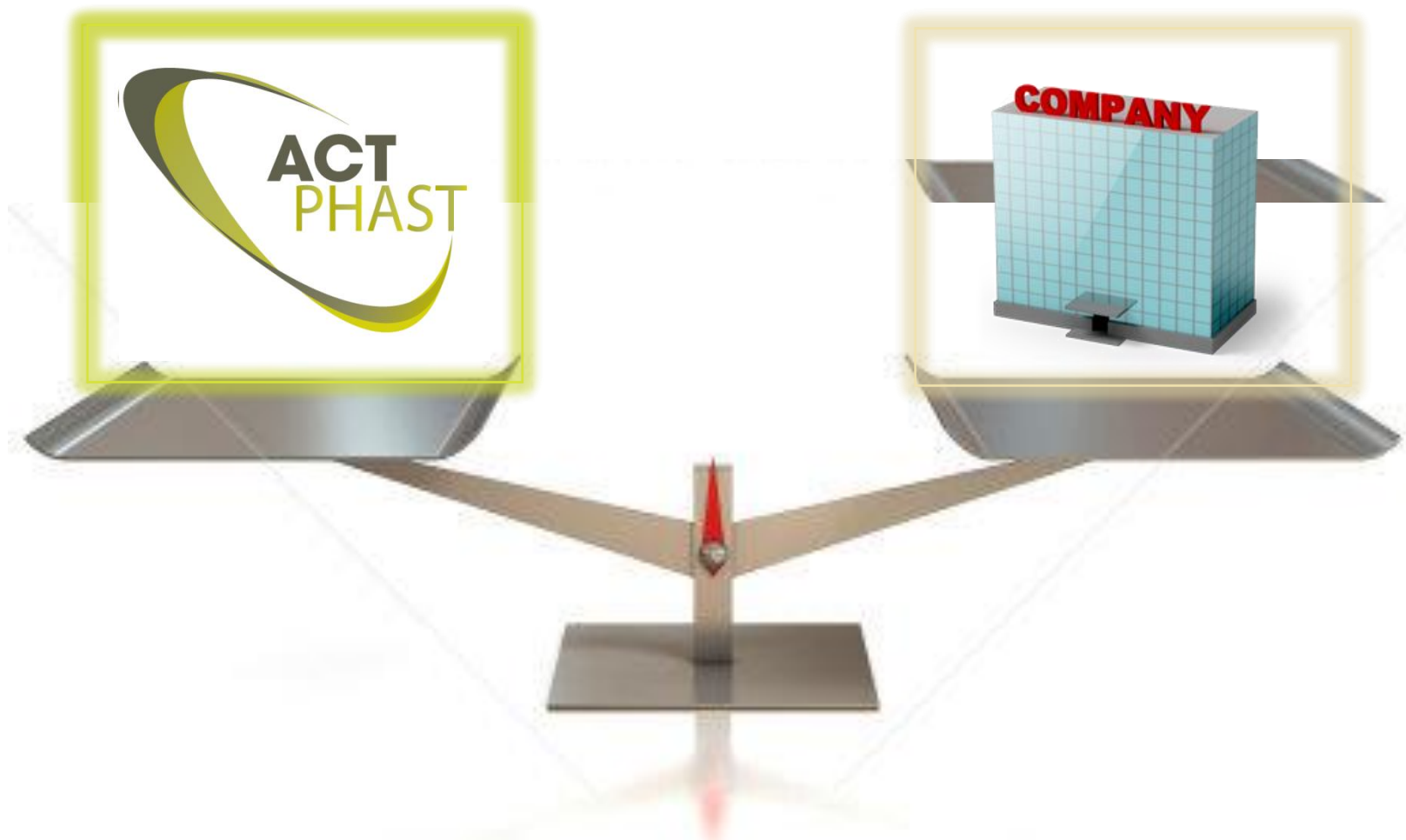
**target innovation
close to the market**



**potential impact
on jobs and growth are key**



**Support for SMEs is 100% subsidized
for strongly committed companies**



ACTPHAST supports photonics and photonics-enabled companies



Photonics Companies

**Companies
whose core business
is the production of
photonic components
and systems**



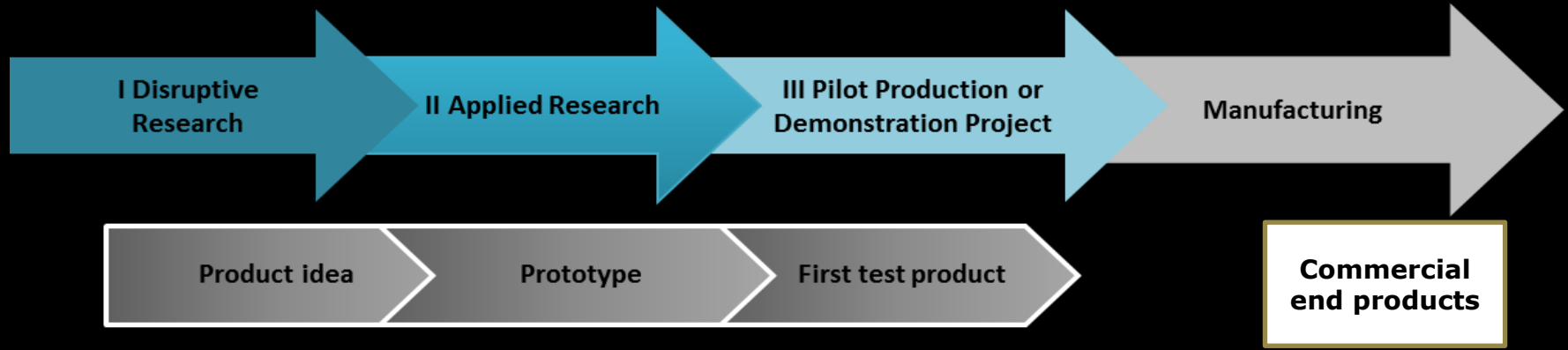
Photonics-enabled Companies

**Companies that can
enhance their products
with the enabling power
of photonics**

ACTPHAST focuses on pre-competitive photonics product innovation from **TRL 4 to TRL 7** with a preference for end-products already close to the market



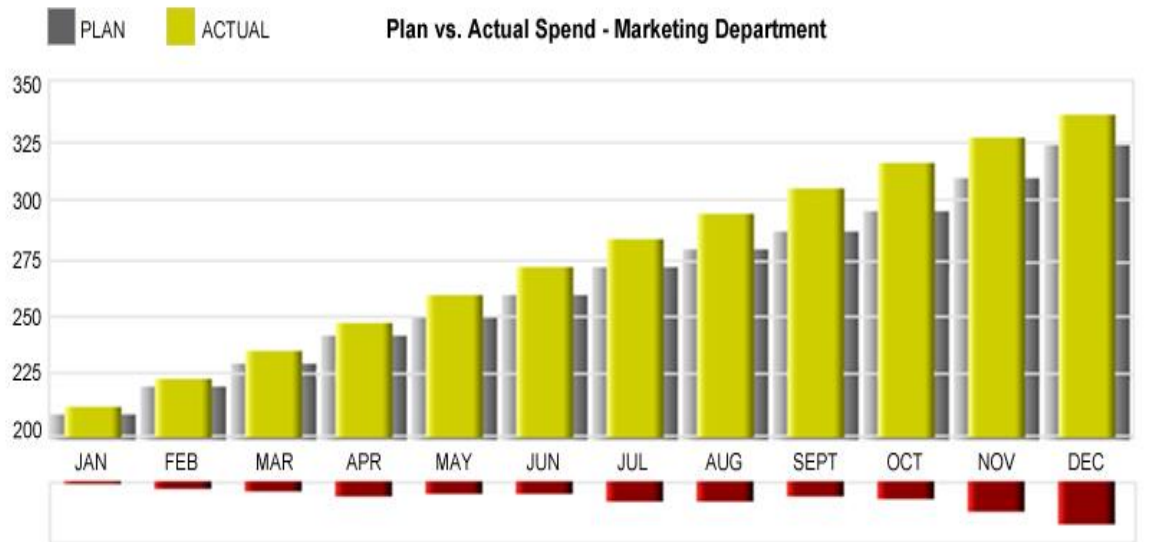
TRL1: Basic principles observed	TRL2: Technology concept formulated	TRL3: Experimental proof of concept	TRL4: Technology validation in lab	TRL5: Tech. validation in relevant environment	TRL6: Demonstration in relevant environment	TRL7: Demonstration in operational environment	TRL8: System complete and qualified	TRL9: Successful missions operations
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Potential increase in new revenues and related EU job creation are ACTPHAST's Key Performance Indicators

Expected	Current Year	Year 1	Year 2	Year 3
Annual Revenue	1 000 000.00	1 030 000.00	1 112 400.00	1 190 268
Variable Expenses				
Supplies	100 000.00	101 970.00	109 026.32	117 824
% Revenue	10.00	9.90	9.80	9.9
Wages	200 000.00	199 820.00	215 805.60	230 911
% Revenue	20.00	19.40	19.40	19.4
Distribution	50 000.00	50 985.00	54 513.16	58 912
% Revenue	5.00	4.95	4.90	4.9
Marketing	50 000.00	50 985.00	54 513.16	58 912
% Revenue	5.00	4.95	4.90	4.9
Other Variable	50 000.00	50 985.00	54 513.16	58 912
% Revenue	5.00	4.95	4.90	4.9
Total Variable	450 000.00	454 745.00	488 371.40	525 473
% Revenue	45.00	44.15	43.90	44.1
Gross Profit	550 000.00	575 255.00	624 028.60	664 794
% Revenue	55.00	55.85	56.10	55.9
Mark-Up %	122.22	126.50	127.78	126

Fixed Expenses	
Location	
% Revenue	
Salaries	
% Revenue	
Administration	
% Revenue	
Interest	
% Revenue	
Other Fixed	
% Revenue	
Total Fixed	
% Revenue	
Total Expenses	
% Revenue	
Profit/Surplus	
% Revenue	

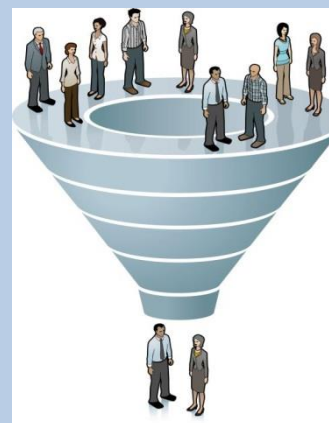


ACTPHAST's action plan

OUTREACH



**QUALIFICATION
AND
SUPPORT**



IMPACT



OUTREACH

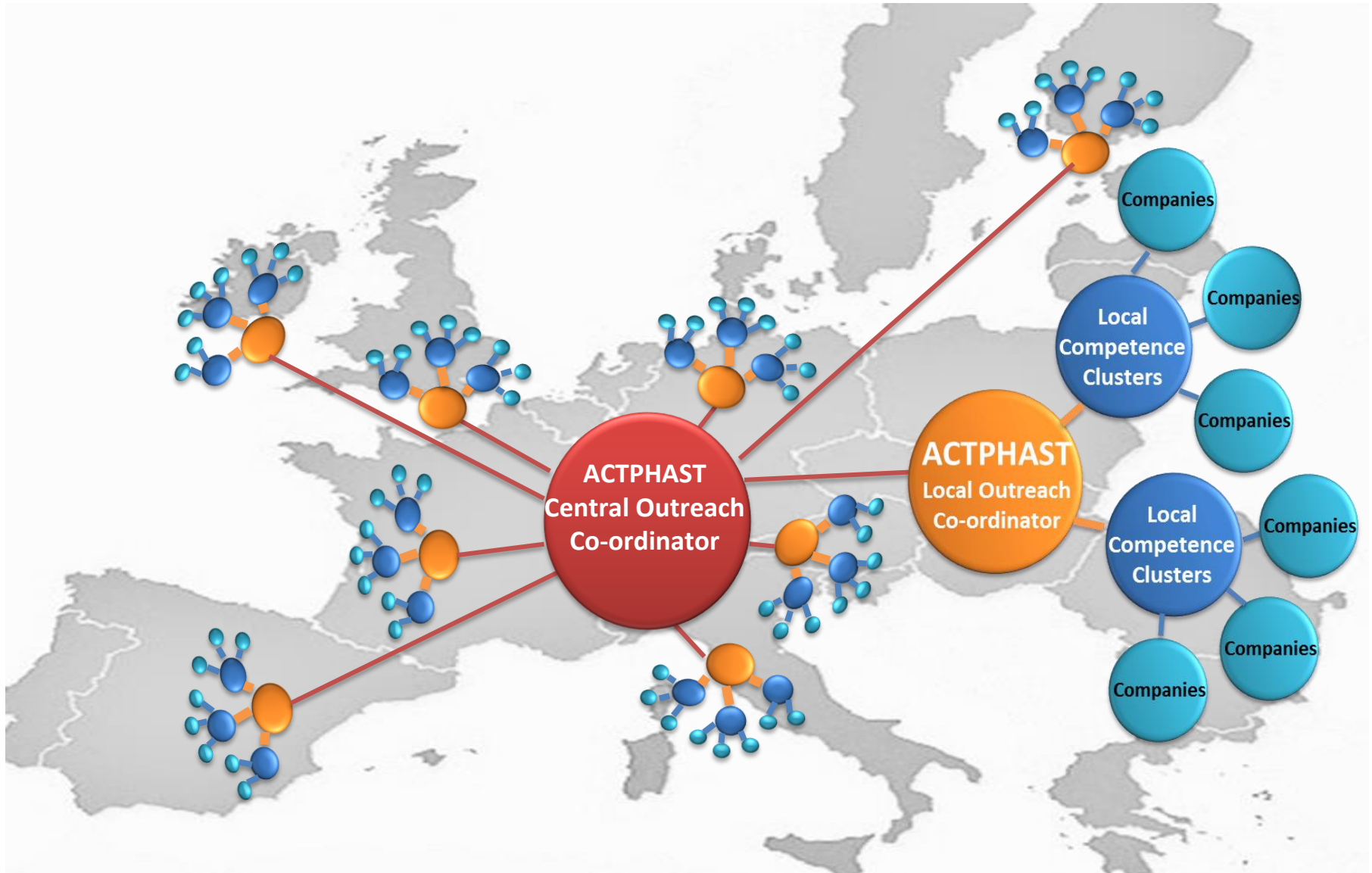


Professional business developers act as Local Outreach Coordinators in a designated region





ACTPHAST reaches out to thousands of companies by teaming up with regional competence clusters



From “first contact” to “project leader appointment”

QUALIFICATION
AND
SUPPORT



COMPANY
INQUIRES



SCOUT
APPOINTED



SCOUT
VISITS

2 WEEKS

1 WEEK



CC POINT
INFORMS



TCT
APPOINTS SCOUT



TCT
INFORMED Go-NoGo

SCOUTING PHASE

PHASE 1: SCOUTING

- Discuss the innovation request
- Can ACTPHAST help?
- PRL level of novel product
- TRL level of the innovation support
- Potential impact on growth and jobs
- Maturity of business plan
- Commitment of company
- Intellectual Property

QUALIFICATION
AND
SUPPORT



From “project leader” to “proposal granted”



**PROPOSAL
SUBMITTED**



**PROPOSAL
GRANTED**

2-4 WEEKS

2-4 WEEKS



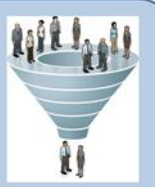
**TCT
EVALUATES PROJECT**

PROPOSAL PHASE

PHASE 2: PROPOSAL

- Project leader writes proposal
- TCT evaluates proposal
- Focus on
 - Potential impact of the project
 - Urgency of support
 - IPR agreement
 - Cost of project
 - Company contribution
 - Return on Investment

QUALIFICATION
AND
SUPPORT



“Execution phase” and “impact measurement”



**CUSTOMER
SATISFACTION**

**PROPOSAL
GRANTED**

**PROGRESS
REPORT**

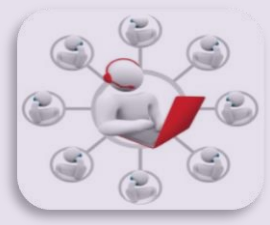
**CONSENSUS
REPORT**

0-12 WEEKS

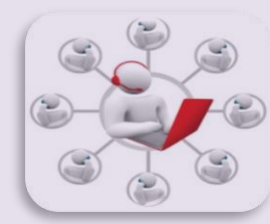
8 WEEKS

8 WEEKS

8 WEEKS



**CC POINT
INQUIRES**

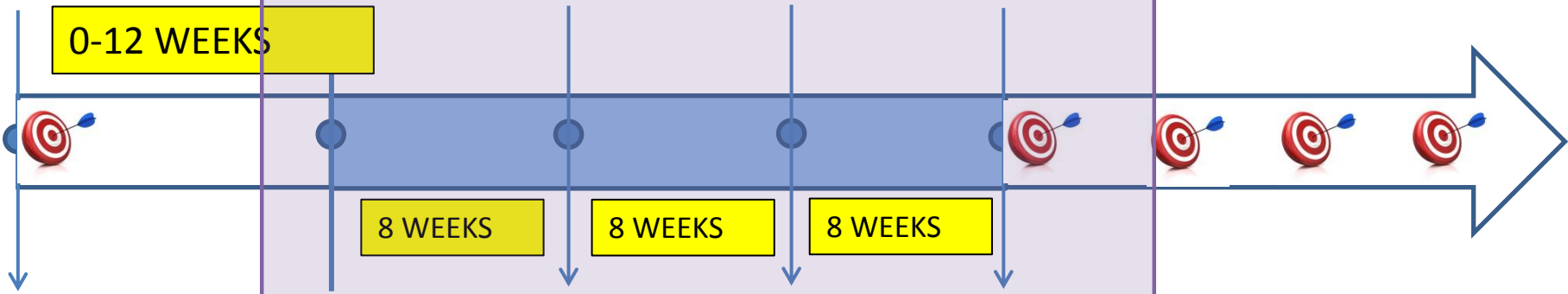


**CC POINT
INQUIRES**



**PERIODIC IMPACT
MEASUREMENT**

Execution phase



ACTPHAST targets short-duration high-impact projects while striving for timely support in collaboration with the companies



**COMPANY
INQUIRY**



**PROPOSAL
GRANTED**



**CONTRACT
SIGNED**

2-3 Months

3 Months

average project duration of 6 Months



**PROJECT
STARTS**



**PROJECT
ENDS**

ACTPHAST's Quantitative Key Performance Indicators



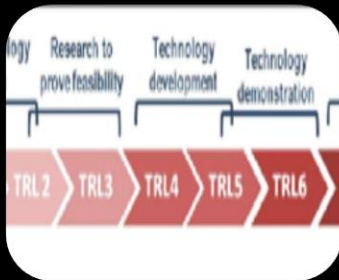
**leverage of
EC R&I funding**



**timeliness
of support**



**customer
satisfaction**



**advancement in
TRL**



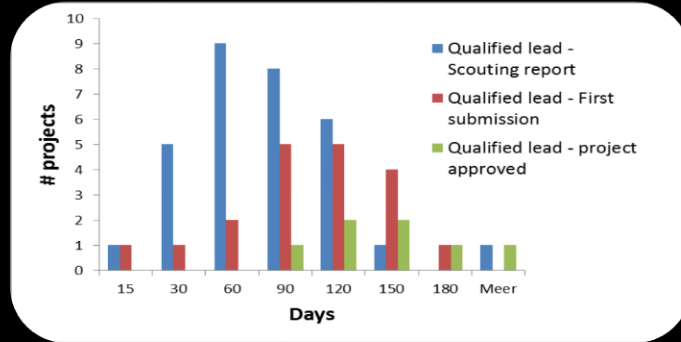
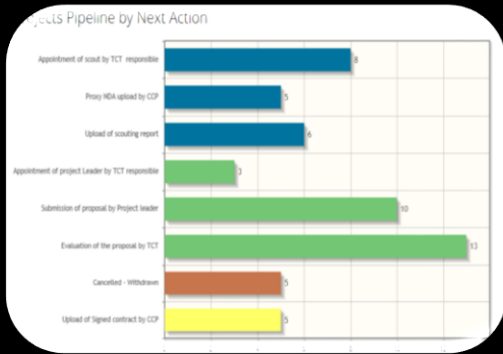
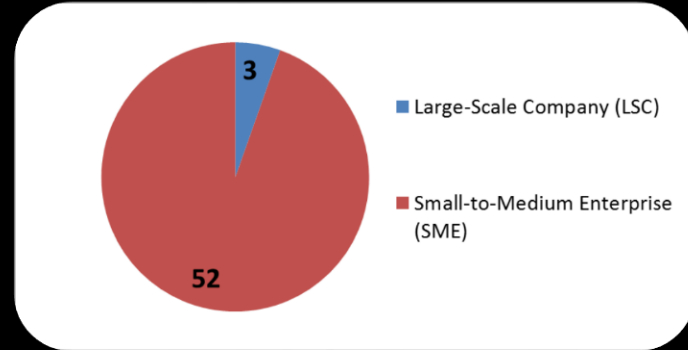
**projected increase
in company's revenues**



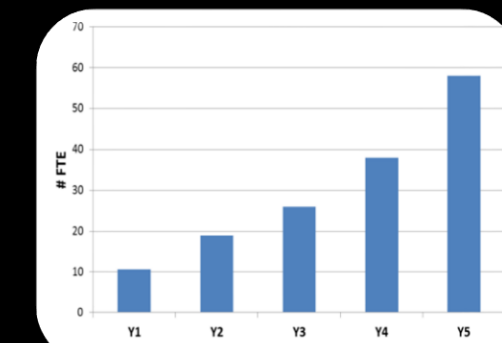
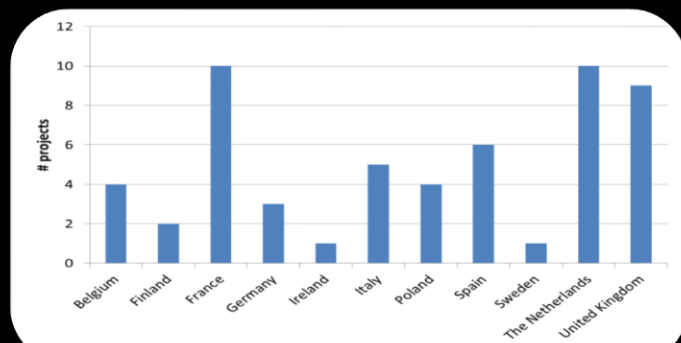
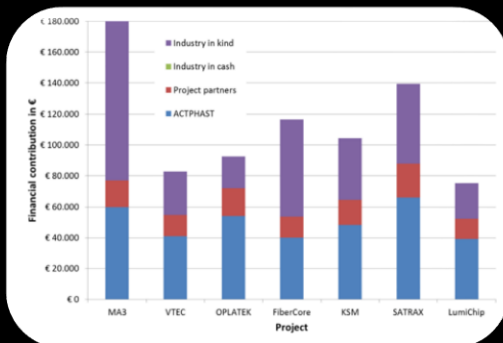
**projected increase
In number of jobs**



ACTPHAST monitors its impact on a real time performance dashboard



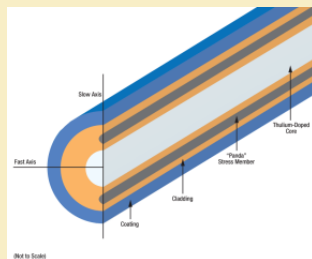
Project	TBL 1	TBL 2	TBL 3	TBL 4	TBL 5	TBL 6	TBL 7	TBL 8	TBL 9	Advanced TBL level
MA3		X								2
VTEC			X							1
OPLATEK									X	2
FiberCore								X		2
KSM						X				3
SATRAX						X				1
LumiChip								X		2
Projects		3	7	6	2	1				



Companies receiving support

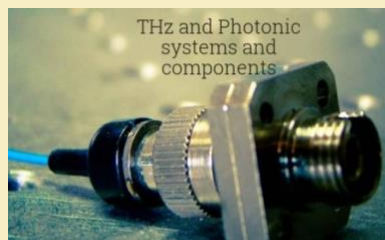


optical amplifiers

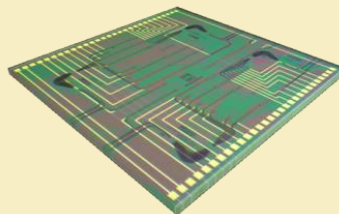


Erbium-doped extended mode fiber

IPHT



THz components



InP frequency comb generator for THz

**CNIT
OCLARO**



Head-up displays for avionics



hot embossing of free-form optics



**VUB
KIT**

Examples of SMEs receiving support

H O L O G R A M
I N D U S T R I E S



**anti-counterfeit
products**



**resonant gratings
for security**

**CNRS
UEF**

LAZER



**cycling
helmets**



**visor-mounted
displays**

**IMEC
VUB**

TOMRA



**food
sorters**



**LED-based
sorting**

**VUB
KIT
VTT**

Examples of SMEs receiving support



**power system
protection**

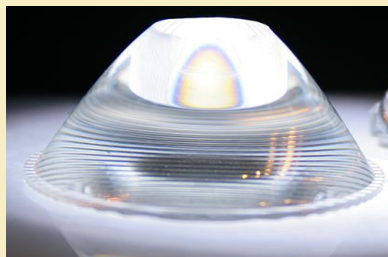


**FBG interrogator
for power industry**

TNO



**optical inspection of
cap feeding of
pharmaceutical
bottles**

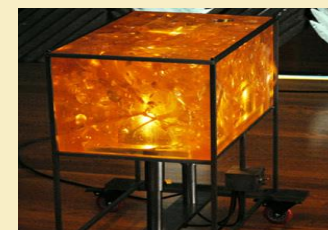


**dedicated free form
imaging optics**

**WUT
VUB**



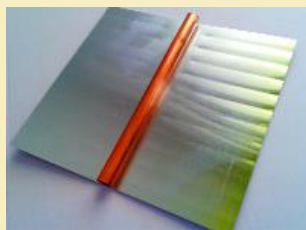
fireplaces



**feasibility study
of a virtual fireplace**

WUT

Examples of SMEs receiving support



**solar
thermal systems**

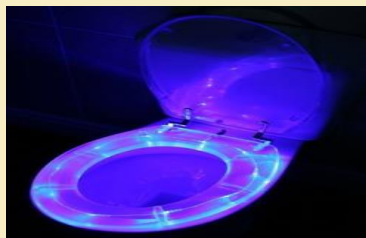


**temperature/
pressure sensors**

FORTH



**train pumping
sewage**



**UV-illumination
of pathogens**

VUB



**IT solutions for
renewable energy**



**ice-on-turbine
optical detection**

WUT



Results after 30 months

- 66 innovation projects in 14 EU countries (average project duration 6 months)
 - 60% of these companies receive EU support for the first time
 - 46% of these companies are non-photonics companies
 - 26% of these companies has never heard of photonics before
 - average cost per project is 105k€ of which 45k€ ACTPHAST funding
 - R&I expenditure leverage factor is 2,5
 - 90% of the companies very satisfied with ACTPHAST support
- 13 of the 66 projects target 22 million € of additional VC funding
 - 53 of the 66 projects target 281 million € new revenues in the next 5 years
 - together the 66 companies expect to create 423 new EU jobs in the next 5 years



Latest ACTPHAST support statistics - click for more>>



INNOVATION PROJECTS



FOR SMES



FOR NON-PHOTONICS COMPANIES



POTENTIAL NEW JOBS

A unique one-stop-shop solution for supporting photonics innovation in European companies

especially adapted to the needs of small- and medium-sized enterprises

[Watch our video](#)

[Download presentation](#)

Why is it successful?



**focus on the company's
innovation challenge**



**subsidized innovation
lowers company's
innovation threshold**



**centralized contact point
quick guidance**



**single-stop shop
top experts and
technology**



**low administrative
overhead
for company**



**timely
support**



Effective impact through synergy and collaborations

- lowering the CSA project borders and leverage impact through synergy and collaboration
- invest in multiple concertation meetings and their follow up to exchange best practices
- swiftly refer or transfer companies to the dedicated innovation support initiatives
- gradually integrate successful innovation instruments in a dedicated large innovation hub
- exchange the coordinates of pro-active clusters (photonics and non-photonics)
- jointly identify high-potential start ups and SMEs for the investment fora e.g. EPVF
- team up with the “Photonics 4” initiatives (EuroPho 21)
- adopt tool box to detect (evaluate) TRL and PRL levels (Respice SME’s)
- Teaming up with EPRISE Photonics Roadshow (e.g. include ACTPHAST in B2B meetings)
- Exchanging candidate SMEs with Laser-GO and teaming up with matchmaking events