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PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	





In this edition:

- 1 **RespiceSME in a nutshell**
- 2 **The Value Chain Analysis tool**
- 3 **RespiceSME Retrospect – Laser World of Photonics 2017**
- 4 **Business & Technology Profiles**
- 5 **RespiceSME Video Pitch Contest**
- 6 **Calendar of Events**

Dear readers,

We proudly present to you the 3rd edition of our project newsletter. Read in this edition about the **value chain analysis** developed by **RespiceSME**. We also take a look back at the latest **RespiceSME** events at Laser World of Photonics: The workshop discussed “Aligning education with innovation” and the Cluster Meeting bore interesting insights on photonics in automotive. In section 4 we put the focus on business in photonics and list **current business & technology offers or requests issued by European SMEs** – perhaps one of these is of interest to your company?

The [RespiceSME Video Pitch Contest](#) calls SMEs & Start-ups to video pitch their innovative idea or product to the photonics community and win the chance to make a professional edited marketing video. Speaking of innovations, RespiceSME will present “[Success stories on cross-sectorial innovation](#)” at the IoT Solutions World Congress in Barcelona on 3rd October. We hope to see you there!

Yours Faithfully,

The RespiceSME Team

RespiceSME in a Nutshell

RespiceSME is a European Commission funded project, which started in January 2016. **RespiceSME** proposes new approaches for stronger innovative effectiveness using a **3-dimensional approach**.

In the first dimension, RespiceSME will evaluate and **stimulate the innovation potential** in order to strengthen the innovation capacity of high-tech photonics SMEs.

In the second dimension, **RespiceSME** will **enhance the global technological exploitation of photonics** innovation capacity by analysing different value chains valuable for high-tech photonics SMEs. This will allow significant **leveraging of non-photonics sectors** such as Environment/Energy, Transport and Manufacturing and thereby, enabling the **penetration of new markets** and/or new application areas close to markets.

The third dimension focuses on creating a **bridge over the ‘Valley of Death’** to increase the competitiveness of the European photonics sector by developing **Best Practices** for enabling photonics SMEs access European and regional **Research Technology Organisations**, harnessing educational and **training** programmes aligned with their specific needs, determining next generation regional innovative **smart specialisation strategies** and providing **access to public and private financial supports**.

For regular updates on the project and exciting upcoming events please visit our website
www.respice-sme.eu

And follow us on
twitter.com/RespiceSME



Evaluation of New Photonic Concepts – The RespiceSME Value Chain Analysis



RespiceSME has developed a structured approach for assessing the value in a photonics innovation. The approach is based on an analysis of the value chain and focuses on a specific product or service. The analysis is undertaken across three strategic domains – stakeholder intensity, technology readiness levels, and innovation potential. The analysis performed in these three domains can identify high potential market segments, key strategic partnerships, and research priorities.

Introduction

The RespiceSME analysis tool offers a structured approach for exploring impact of the wider system and value chains in which a future photonics product concept might contribute.

Many value chain analysis techniques are based on geographical regions or specific industrial sectors: Our approach is to develop a value chain and system model based on a specific product. The value chain tool provides a structured framework of analysis based on the *technical* value chain i.e. the chain from raw materials through product production to end-user customers.

The analysis is based on three key factors: **Stakeholder Mapping, Technology Readiness Levels, and Innovation Potential.**

Stakeholder mapping

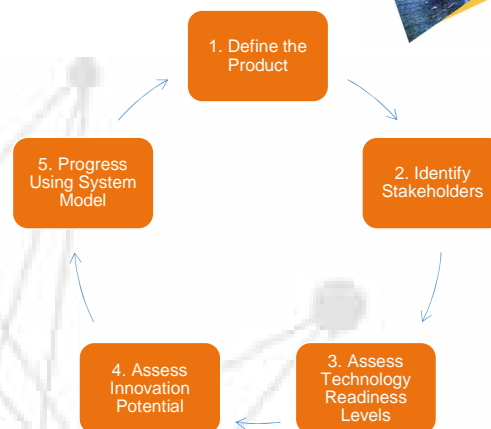
Stakeholders are any private or public enterprise that can contribute to, or benefit from the technology. Stakeholder mapping is a process of stakeholder identification and assessment starting with key word identification at each stage of the value chain. Stakeholders are nominated based on geographical and accessibility guidelines and are weighted in terms of the potential impact of their interaction with the product.

TRL

Technology Readiness Levels are assessed for every stage of the value chain. The TRL identifies technical risk and the areas where additional development should be targeted. The TRL is assessed in terms of the stakeholder's integration or application of the photonics product.

Innovation potential

This is perhaps the most original aspect of the value chain analysis tool. The assessment of the innovation potential takes the form of a series of questions designed to assess the likelihood of the innovation (i.e. new product or application of the product) being realised. The innovation potential is judged based on two strands: Technical Potential, and Market Potential. The approach assesses innovation environment, the system environment in which the photonics product operates, and the potential for future scalable innovation.



Outputs

Combining the Stakeholder Mapping, TRL and Innovation Potential, empowers the value chain analysis technique to generate a structured list of stakeholders that are categorised by their importance from the product development perspective. The stakeholder identification methodology favours local or accessible partners and thereby produces a list of engageable potential customers or suppliers.

Potential customers, stakeholders on the buyer side, can be further categorised into the application fields for the photonics product. The identification of a numerical value for the innovation potential for each stakeholder can be aggregated to provide an indication of the potential for an application field. This same approach can be used to evaluate: new applications for an existing product, new products, new markets, or new target customers.

This product is being offered by RespiceSME to photonics companies looking to explore new market sectors. If interested in learning more about this system, please contact

Dr. Ian Mc Cabe, National University of Ireland Galway:
ian.mccabe@nuigalway.ie



RespiceSME Retrospect – Laser World of Photonics 2017

“Fairs like Laser World showcase the high potential of photonics innovations. In RespiceSME we help photonics SMEs to access and benefit from this market.”

**Samantha Michaux,
RespiceSME coordinator**



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Laser World of Photonics 2017 in Munich has made history with a new record in numbers – more than 1.293 exhibitors presented their products at the fair, attracting more than 32.000 visitors. RespiceSME contributed to the fair with two events that discussed how to trigger innovation through education and photonics in the automotive sector - two topics, which will impact the future of photonics in Europe.

Workshop “Aligning Education with Innovation” – Increasing innovation-readiness of students & graduates

The workshop “Aligning education with innovation” on 28th of June presented ways of encouraging innovation and entrepreneurial spirit in photonics through education. Speakers from Universities and RTOs presented how entrepreneurial programmes for academics help graduates to gain a foothold in the business world by providing know-how and consultancy. Initiatives such as the Innovation & Entrepreneurship Lab (ieLab) at the ETH Zurich or the Open Entrepreneurship programme at the Technical University Denmark have yielded success in encouraging and enabling young entrepreneurs.

Regarding the skills academia needs to teach, company representatives pointed out that they seek for employees which know about innovation types and which are proficient in visualizing ideas, making their knowledge accessible to others. The workshop also presented extra-curricular programmes like Phablabs 4.0 or Master +, which offer access to lab facilities and company visits, contributing to foster innovation-minded thinking among (University) students. The workshop affirmed: innovation draws on many sources, e.g. expertise, creativity and risk taking, but sustainable innovations are nourished by a supporting environment.

To download the workshop's presentations, please see [here](#).

2nd RespiceSME Cluster Meeting on innovation in Photonics - Shaping the mobility of tomorrow

The 2nd Inter-Cluster Meeting on 29th of June debated how to enhance innovation in SMEs and presented the RespiceSME tools for assessing the innovative capacity of companies. Putting the focus on the automotive industry, representatives of innovative photonics companies demonstrated how light technologies transform our mobility. Autonomous driving technologies and Advanced Driver Assistance Systems (ADAS) rely on different applications of light and optic technologies. Presentations showed: with further innovations in the application of LiDAR and imaging for improving the detection of objects, self-driving cars will soon become a reality.

The meeting concluded with an interactive session, bringing the participants into 'motion'. Each company or cluster representative was asked to map their own company or the companies in their network regarding their countries of operation, their position in the value chain and the technology fields their products cover. This resulted into colourful posters, showing the diversity and great potential of European photonics companies.

For more information on the 2nd RespiceSME Inter-Cluster meeting and to download the presentations, please see [here](#).



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Business & Technology Profiles – For strong cooperation and thriving businesses in Photonics

Introduction

RespiceSME is dedicated to stimulating cooperation between photonics SMEs and potential integrators or customers of light technologies in Europe and beyond. To this end, RespiceSME offers the dissemination of cooperation proposals and requests via its project platform.

With the Business & Technology Profile service of RespiceSME, interested companies have the opportunity to look for customers and integrators of a newly developed product, offer expertise or find partners, who like to participate in an EU-funded project. For more on how to launch a request and to see the so-far submitted Business & Technology Profiles, please view the project website: www.respice-sme.eu/the-respicesme-toolbox/business-technology-profiles/

An overview on the submitted Business & Technology offers and requests is provided below. To show more of the cooperation profile, please click on the offer's title.

“European companies are a driving force for photonics innovation and the continent is home to many ‘hidden champions’. However, in light of the innovative capacity of photonics as key enabling technology, there is great potential for further market exploitation.”

Samantha Michaux, RespiceSME coordinator

Cooperation Offers

France

[Business and Technology Offer: Contactless online production or process control & automated inspection of dielectric compounds/ plastic-metal hybrid systems](#)

Offer: Contactless non-destructive testing and biomedical imaging, know-how in terahertz analysis for various applications. Partnerships sought: Industry / in biomedical sector also research organisation

Partnerships sought: Technology deployment on mature applications; Custom-made development in collaboration on new applications and technologies

[Technology Offer: Unclonable fingerprints through 4D Printing of multifunctional thin oxide films](#)

Offer: Etiquette-based security system, relying on patterned material properties unique fingerprint used to identify, trace or authenticate smart objects or data (physically & digitally).

Partnerships sought: Industrial or governmental cooperation; licensing of patented innovation

Germany

[Technology Offer: Thin disc laser technology](#)

Offer: Thin disc laser technology from components to complete laser sources.
Partnerships sought: Commercial agreement with technical agreement in laser processing, technical and research agreement for HHG and OPCPA.

Germany

[Business and Technology Offer: Spectral Middleware](#)

Offer: Expertise in spectroscopy and hyperspectral cameras; spectral middleware software (connection between camera & machine) for sorting, recycling, quality control and colour measurement.

Partnerships sought: Partnerships with hardware companies active in spectroscopy or hyperspectral cameras; manufacturing industries looking for software solutions for their machines.

[Business and Technology Offer: Cognitive Augmented Reality – Using AI on reference videos for Augmented Reality content creation](#)

Offer: Technology that allows the extraction of digital process knowledge from a reference video. This process knowledge can be used as step-by-step instruction manuals or for image based error detection.

Partnerships sought: Academic partners and application partners to further enhance the technology with new sensor equipment, new algorithmic approaches or new fields of application.



Business & Technology Profiles – More Cooperation Offers

Greece

Technology Offer: Automatic characterization of films and coatings on large substrates

Offer: Compact bench-top tool suitable for automatic characterization of films and coatings on large substrates

Partnerships sought: Industrial partners for commercial agreement

Technology Offer: Turn-key solution for accurate & precise optical characterization of transparent and semi-transparent single films or stack of films

Offer: USB-powered characterization of (semi-)transparent single films/stack of films.

Partnerships sought: Industrial partners for commercial agreement

Italy

Business and Technology Offer: Smart and portable devices for biochemical analysis

Offer: Services regarding the design/implementation of optical diagnostic devices for biological applications.

Partnerships sought: Industry or academic partnership, distributors or R&D/research

Lithuania

Business and Technology Offer: Highly customized micromachining workstations

Offer: Optimized micromachining workstations, equipped with incorporated nanosecond, picosecond and femtosecond laser sources for scientific and industrial applications.

Partnerships sought: Commercial companies and research institutions that are interested in the acquisition of micromachining devices.

Lithuania

Business and Technology Offer: Manufacturing of optical coatings and components

Offer: Optical components coated with various technologies, e.g. Resistive Thermal Evaporation, Electron Beam Evaporation, Magnetron sputtering Deposition.

Partnerships sought: Business partners (industry, academy or research organisations) who are looking for high-quality dielectric thin film, metallic coating for various optical glass and crystals.

Sweden

Technology Offer in Fiber Optical Sensing

Offer: Modules, subsystems and systems based on Fiber Bragg Gratings (FBGs) for Telecommunication and Fibre Optical Sensing

Partnerships sought: Applied Research Organisations for technical or research co-operation agreement in the field of Fibre Optical Sensing with a particular focus on harsh environment packaging, optronics and metrology.

Business and Technology Offer in development of products and equipment incorporating optics and illumination

Offer: Expertise in lighting and optics; Competitive advantage using smart and eye-catching light design; Reduced costs for manufacturing with optimized and production oriented solutions; Quicker and more efficient production with improved quality control

Partnerships sought: Research and commercial partners who are developing new products and need consultancy services for production oriented solutions.

For further information and to contact one of the SMEs of the above profiles, please contact:

Samantha Michaux, Steinbeis 2i GmbH
michaux@steinbeis-europa.de



RespiceSME Photonics Video Pitch Contest – Searching for Europe's Smartest Ideas

RespiceSME offers you the opportunity for a 'video elevator pitch' to the photonics community

Pitch your photonics business idea or innovative product and win the support of professional editors to make a strong marketing video for your company

How to participate?

Are you a student, start-up or a SME with a great idea or product you would like to pitch to other European market leaders and potential business investors?

Then present your idea or product in a short video of less than 5 minutes, upload it on YouTube (or any other video platform) and send the link to the RespiceSME consortium by latest **31.10.2017**.

We encourage you to be creative and use **visuals or simulation** to present your idea, prototype or product in the video.

RespiceSME will promote your video on its website and among its network of European photonics companies, clusters and research institutions.

Why to participate?

A jury of photonics business experts will select the **3 best videos** based on the **uniqueness** of the idea they present, the **added-value** for dedicated **business cases** thus far and the potential for further exploitation.

The creative mind(s) behind the winning video will have the chance to work with a marketing agency to make a professionally edited video, to be used for promoting their innovative products to investors, business partners and customers.

On top, they will get a free training on business development and innovation management, funded fully by the RespiceSME project.

For more information on how to participate in the RespiceSME Video Pitch Contest and the terms & conditions, please see the website www.respice-sme.eu/video-pitch-contest

Calendar of Events

RespiceSME presents "SUCCESS STORIES ON CROSS SECTORAL INNOVATION" at IoT Barcelona on October 3rd 2017



LIGHT TECHNOLOGIES IN TRANSPORT, MANUFACTURING, ENERGY & ENVIRONMENT

Time: 9:00 – 13:00

Location: Internet of Things Solutions World Congress (IoT) Barcelona

Room: Halls 4 & 5 - Room 1.4

About

Listen to **business cases** of photonics regarding cross-sectoral innovation at the RespiceSME gathering at IoT Barcelona. Representatives of SMEs and large companies will present their business cases at the event and share about the main challenges and opportunities for photonics in transport, manufacturing and energy & environment. Each sector presentation will be followed by a mapping session of business opportunities in these areas.



The RespiceSME event at IoT Barcelona gives you the opportunity to meet and connect with photonic stakeholders for exchanging ideas and planning future collaboration projects.

If you have business in Photonics, Energy, Environment, Transport or Manufacturing Industries, this is your event!

The Internet of Things Solutions World Congress

Location: Fira Gran Via, Barcelona, Spain

Date: 3 – 5 October 2017

The IOT Solutions World Congress is the leading global event dedicated exclusively to joining IoT providers with industry in order to help the latter increase productivity via this disruptive technology.

For further Information, please visit the website:

<http://www.iotsworldcongress.com/>



FURTHER EVENTS

13.09. – 15.09.2017	Photonics Ireland Conference 2017 <i>Galway (Ireland)</i>	http://photonicsireland.ie/
17.09.- 21.09.2017	ECOC 2017 Gothenburg <i>Gothenburg (Sweden)</i>	http://ecoc2017.org/
21.09.- 22.09.2017	5th Cluster Matchmaking Conference in Stuttgart <i>Stuttgart (Germany)</i>	https://www.b2match.eu/cluster-matchmaking-2017
26.09.- 28.09.2017	LpS 2017 - 7th International LED professional Symposium +Expo <i>Bregenz (Austria)</i>	https://www.led-professional-symposium.com/
26.09.- 28.09.2017	22 nd tct Show <i>Birmingham (United Kingdom)</i>	http://www.tctshow.com/
27.09.- 28.09.2017	Medical Technology Ireland <i>Galway (Ireland)</i>	https://www.eventbrite.com/e/medical-technology-ireland-exhibition-and-conference-tickets-31000652787
27.09.2017	Optics Colloquium 2017 "Optics for Medical and Nano Technologies" <i>Stuttgart (Germany)</i>	http://www.ito.uni-stuttgart.de/institut/kolloquium/
3.10.- 5.10.2017	Internet of Things Solutions World Congress <i>Barcelona (Spain)</i>	http://www.iotsworldcongress.com/
9.10.- 11.10.2017	Electric Vehicles Symposium (EVS30) <i>Stuttgart (Germany)</i>	http://www.messestuttgart.de/en/evs30/
10.10.- 12.10.2017	Lighting Technology <i>Essen (Germany)</i>	https://www.lighting-technology.com/en/
11.10.- 13.10.2017	5th Workshop on Specialty Optical Fibers and Their Applications <i>Limassol, Cyprus (Greece)</i>	http://wsf2017.org/
18.10.- 19.10.2017	Optics & Photonics in Sweden <i>Kista (Sweden)</i>	http://photonicsweden.org/optics-and-photonics-in-sweden/
19.10.2017	Med in Ireland <i>Dublin (Ireland)</i>	https://medinireland.ie/
1.11.- 2.11.2017	Advanced Engineering 2017 <i>Birmingham (United Kingdom)</i>	http://www.easyfairs.com/de/advanced-engineering-2017/advanced-engineering-2017/
7.11.- 8.11.2017	Embedded Conference Scandinavia, ECS <i>Stockholm (Sweden)</i>	http://www.embeddedconference.se
8.11.- 9.11.2017	Innovate 2017 <i>Birmingham (United Kingdom)</i>	http://www.innovate2017.gov.uk/?utm_source=ktnwebsite&utm_medium=email&utm_campaign=holdingpage
13.11.- 16.11.2017	COMPAMED 2017 - Hightech solutions for medical technology <i>Düsseldorf (Germany)</i>	http://www.world-of-photonics.com

Thank you for reading us!

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