



# BUSINESS EXPERIMENT

## «HYGIENIZING LAMP»

Cipriano Padovan (Fairwind s.r.l.)

Bassano del Grappa 20 may 2016



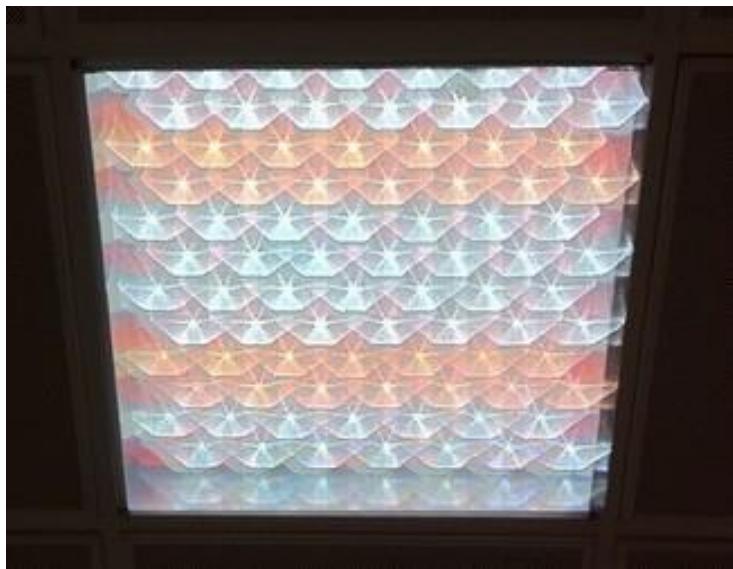


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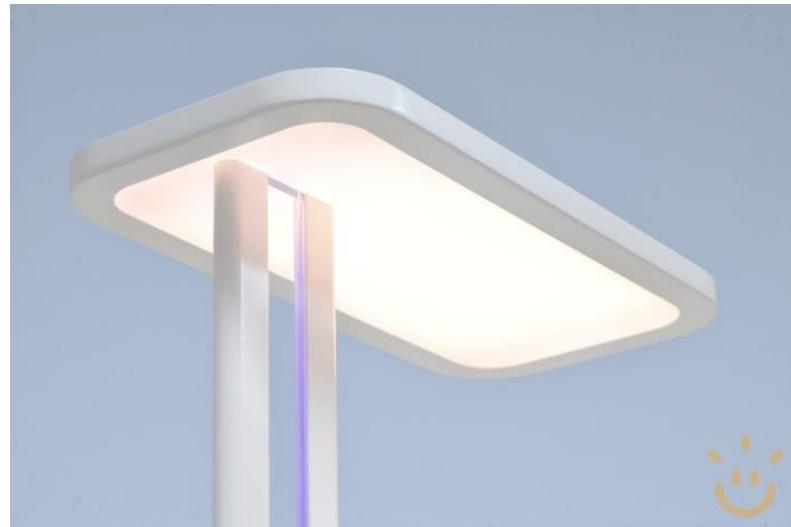
# 1. COMPANIES

H-Lamp





- Circadian cycles appliances for industry, hospitals, homes for the elderly and rehabilitation



H-Lamp





# ARTELIGHT

tailor made solutions

Company dedicated in special lamps assembling, prototypes and manufacturing.



H-Lamp



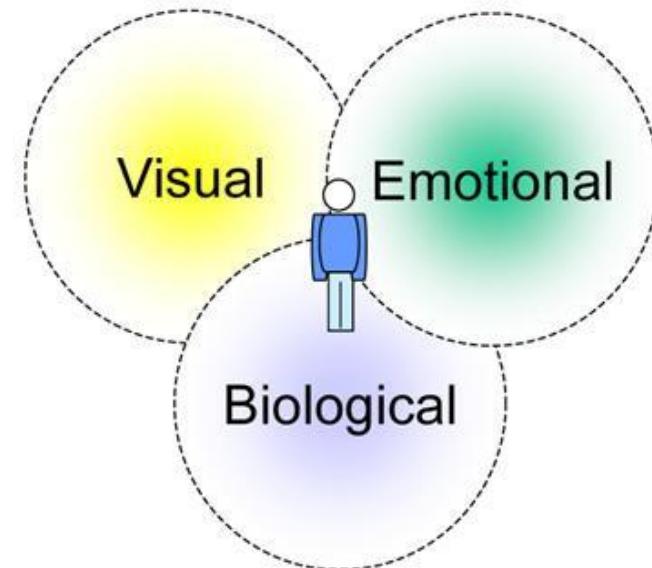
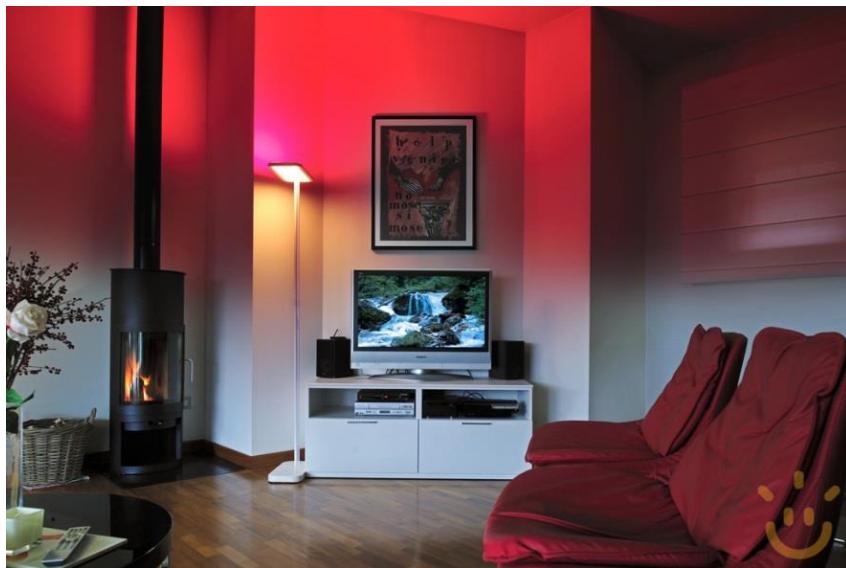


## 2. TECHNOLOGY

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# Human centric lighting paradigm



- **Visual** – sunlight
- **Emotional** – shapes and colour light (aesthetic)
- **Biological** – IR and UV light and dynamic visible light

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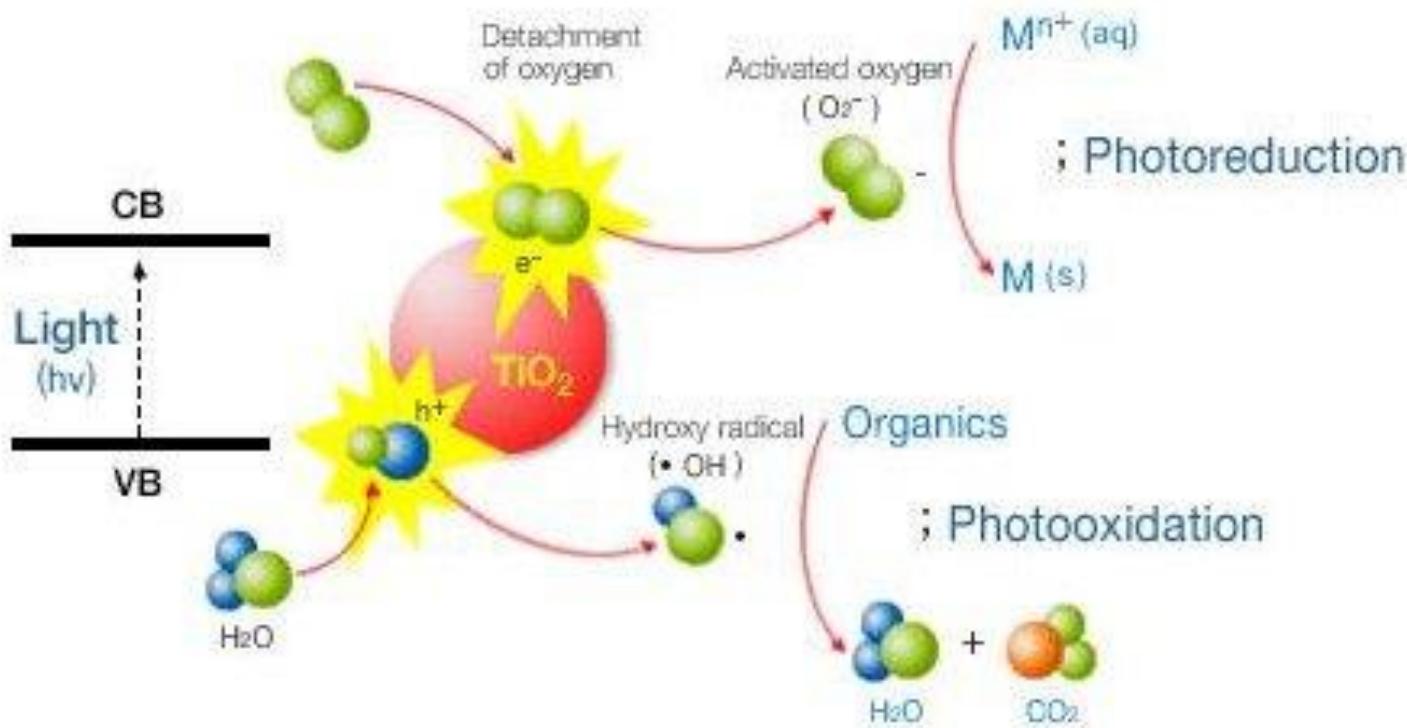


# Airborn Diseases

- tuberculosis
- whooping cough
- chickenpox
- measles
- pneumonia
- colds (all types)
- flu (all types)
- sars
- menengite
- legionellae



This reaction breaks down the molecules of pollutant molecules into innocuous carbon dioxide and water, purifying the air.

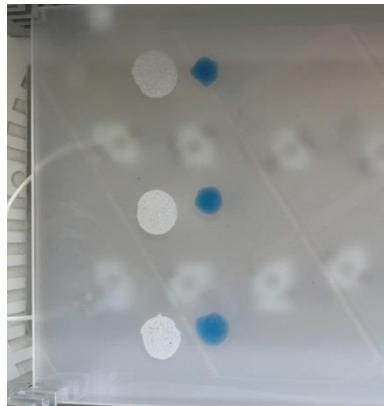


H-Lamp

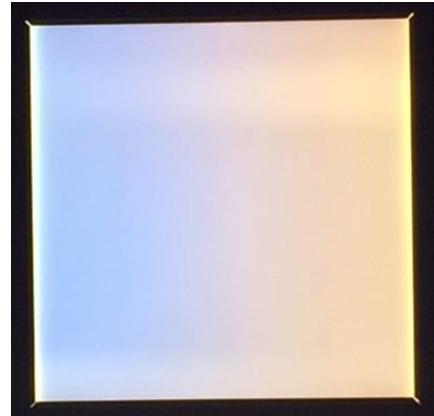


## 2015-2016: FIRST H-LAMP PROTOTYPES

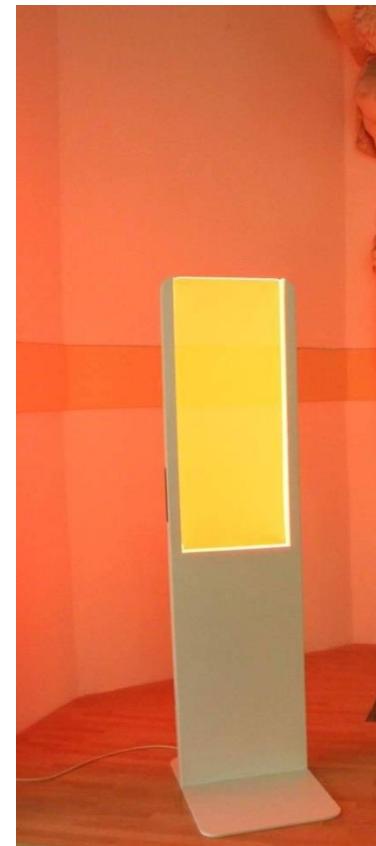
- Set-up of the hygienizing reactor (UV LED-source)
- Set-up of lighting technology (visible LED-source)



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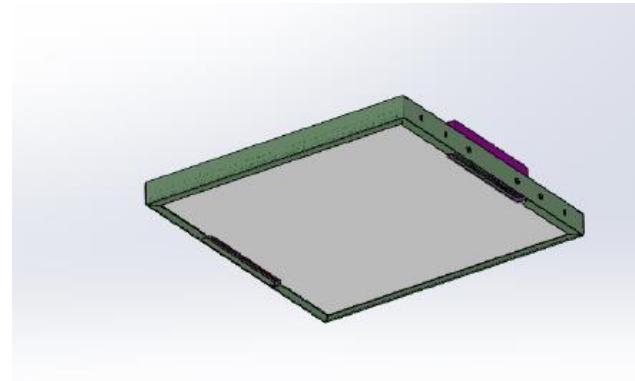
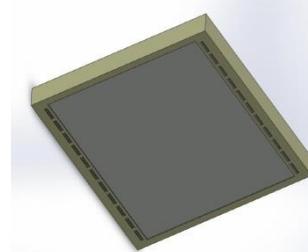
# 3. EXPERIMENTATION

*H-Lamp*



# THE CONCEPT

- FAIRWIND and ARTELIGHT manufactured some concepts of the H-lamp.
- **Key points of the experiments:**
  - Create a compact model of the lamp, coupling the functions of local sanitification and lighting
  - Analyze the market requirements in term of H-Lamp with different sizes and models

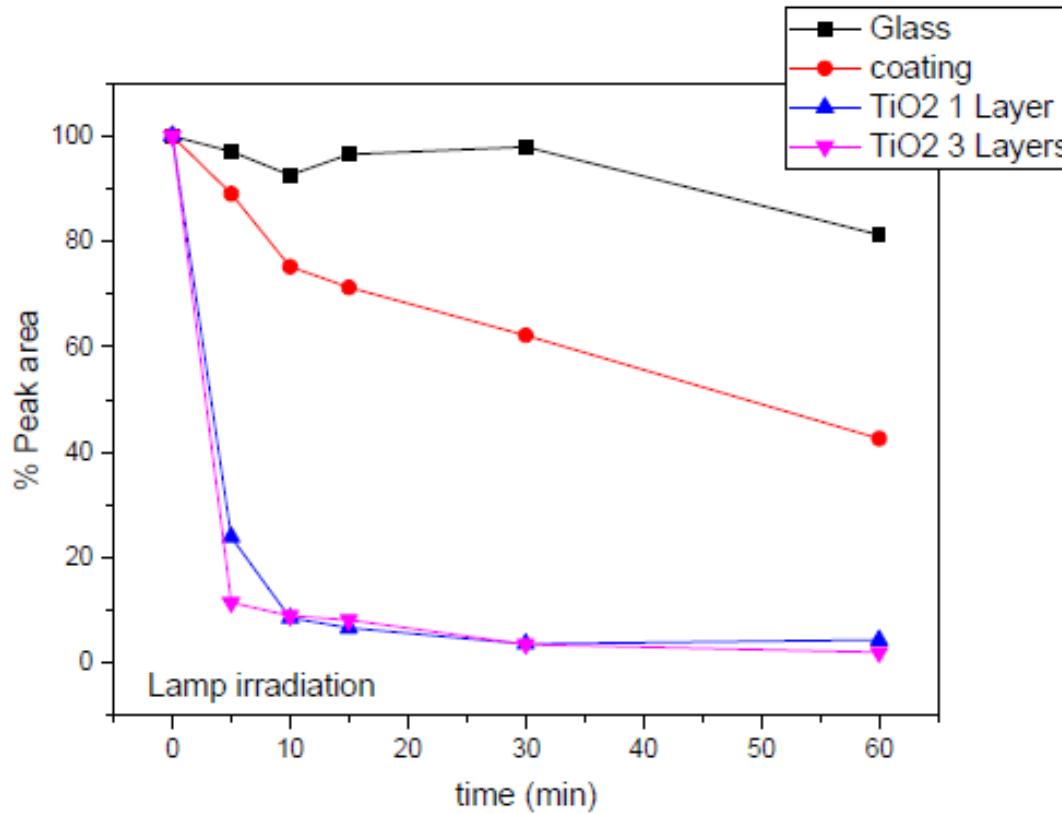


## Key point of the experiments:

- Tuning the TiO<sub>2</sub> deposit to maximize the decreasing of bacterial concentration
- Test with organic hues
- Collaboration for TiO<sub>2</sub> coating
- Bacteriological test
- Safety test
- Photobiological test



## Tuning the $\text{TiO}_2$ deposit to maximize the decreasing of bacterial concentration + Test with organic hues



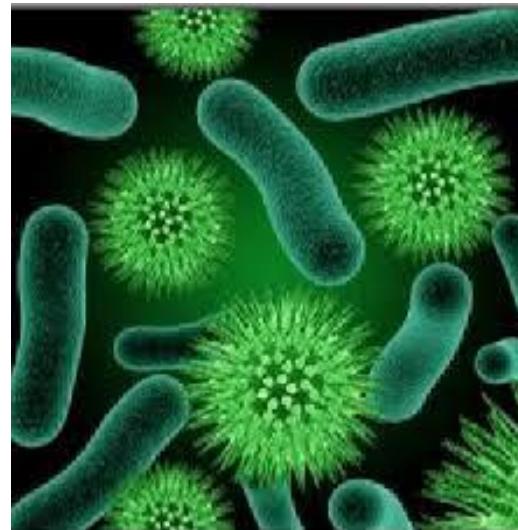
(Collaboration with University of Padua)

H-Lamp



## Key point of the experiments:

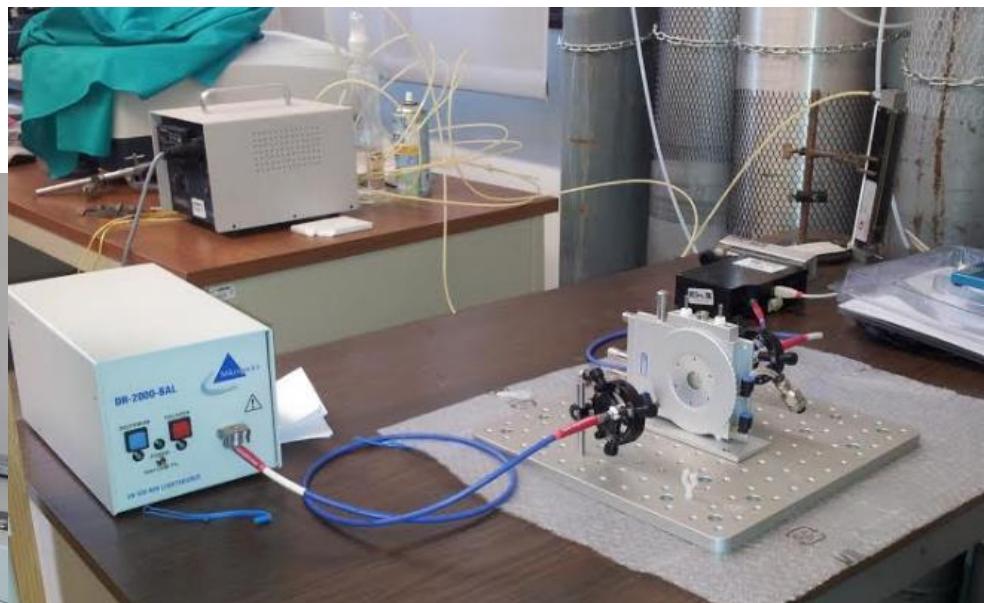
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- Collaboration for  $\text{TiO}_2$  coating



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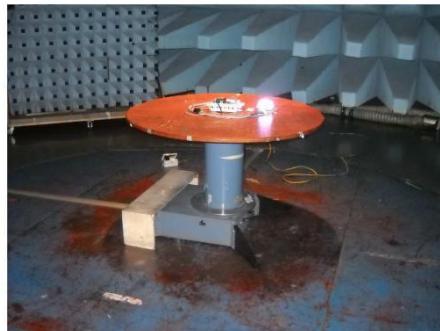


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- Compliance with CE norms about
  - Safety test + EMC (EN60598-1; EN61000-3-2)
  - Photobiological test (EN62741)



H-Lamp





New H-LAMP models have been created:



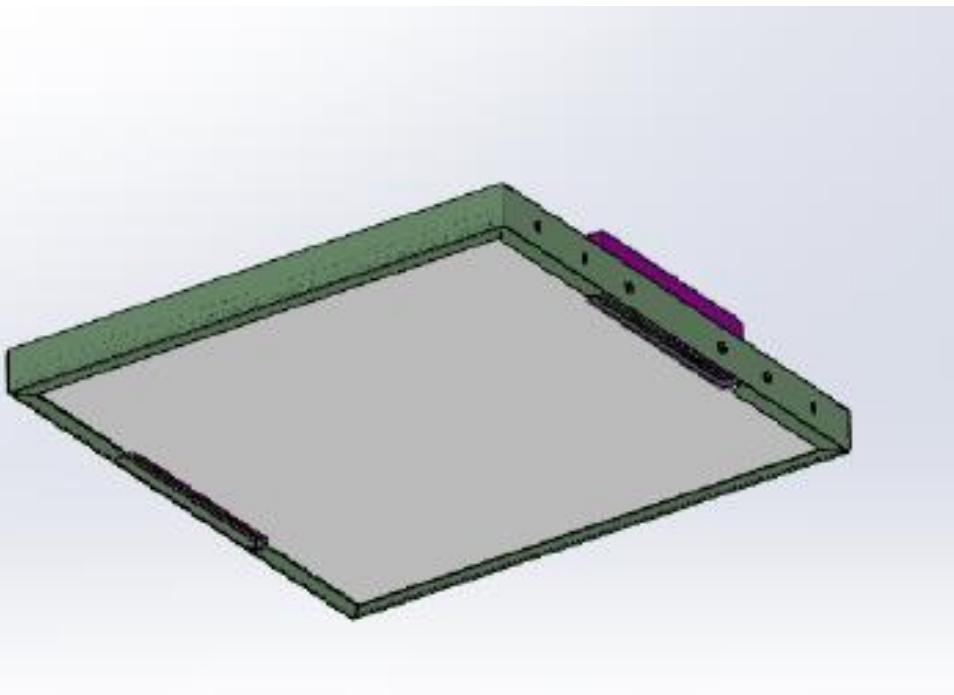
Modello 3

H-Lamp

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New H-LAMP models have been created:



Modello 4

H-Lamp



- Following the previous scientific facts and R&D activities, Fairwind s.r.l. has filed a patent on the H-lamp (June 2015)



- **Fairwind s.r.l. registered trade marks and designs for H-LAMP (March 2016)**
- **1<sup>st</sup> Ident. code: AXYUVS6D4VYVTRFI5BCCWOLNVY**
- **2<sup>st</sup> Ident. code FJNEBTE5DWNTK6GH5JGVX55QVI**
- **3<sup>st</sup> Ident. code NKPWWTPRTULN7U4QECELTWSWA**
- **4<sup>st</sup> Ident. code HYXDLJO3XPI6LSYOXDLRQMUM2M**



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# 4. PLANNING

H-Lamp



- 30.04.2014 Meeting in Bassano for Business Experiments (first brainstorming)
- 15.07.2014 Meeting in Villa Cà Marcello (Luce in Veneto HQ) to present the business idea to potential partners
- 01.09.2014 Meeting at Arte Light with Fairwind
- 15.09.2014 Meeting at Luce in Veneto with Arte Light, Fairwind and Sfiligoi Srl
- 17.10.2014 Meeting at Fairwind with Arte Light
- 31.12.2015 Consortium between the 2 companies
- 31.01.2015 Delivery “Market Analysis” (Open Innovation Srl) and “Prior art search & patent invalidity analysis” (T2i Scarl) to the companies
- 12.02.2015 Meeting at Luce in Veneto office with Fairwind and Arte Light
- 09.03.2015 Fairwind and LIV will meet to decide about the importance of a patent
- 16.03.2015 Fairwind will have a meeting with T2i Scarl to analize the existing patents about this technology and to deeping this aspect.
- April - may: Realization of several concept prototypes
- June 19th: face-to-face LIV meeting as opportunity to talk about the prototype to the stakeholders attending (cities, hospitals, clinics..)
- July2015 – Dec 2015: Realization of pre-industrial samples
- Oct 2015– March 2016: Collaboration with University of Padua for TiO<sub>2</sub> tuning
- Jan- May 2016: Contacts with hospitals and building industry to present the H-LAMP
- 20.05.2016 face-to-face LIV meeting to present the upgraded H-LAMP



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## 5. IMPACT

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- Product release in the market which combines human centric light with sanitization effect.
- Better light and better air for:
  - Hospital waiting rooms
  - Dental clinics
  - Gymnasium etc.
  - Industries
  - Hotellerie and entertainment

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- Increasing life quality of people and reduce footprint.
- Technological research as method and system for developing industrial innovation and competitiveness.
- Development of business networks for new opportunity with other partners.
- Positive impact on revenues and employees.





# 6. CONCLUSIONS

H-Lamp



# LOOKING FOR COLLABORATIONS



- Hospitals, clinics interested in testing the lamp.
- Companies interested in collaboration for lamp distribution in EU.
- Companies interested in collaboration for customisation systems for special applications.



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# THANKS FOR YOUR ATTENTION

For any question please contact:

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For more informations please visit:

<http://www.goodlight.it/>

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