



**23 june 15h > 19h**  
**lighting and visual comfort**

Vrije Universiteit Brussel | ETEC

Valéry Ann Jacobs



Innovation Meeting – 23/06/2015 – p. 1



**ETEC**

houses various research groups



Prof. Lataire

Lighting (prof. Patrick Rombaerts)

Electrical vehicles 

Electrotechnics

Numerical electrochemistry

Various associations

*for example BIV*

Innovation Meeting – 23/06/2015 – p. 2



## ETEC - LIGHTING

can be valuable to your company



Public road-lighting,  
Daylight for architectural applications,  
Lighting simulations,  
Surgical lighting,  
Visual comfort

Innovation Meeting – 23/06/2015 – p. 3



## ETEC - LIGHTING

has done several projects with



Barco,  
Wever & Ducré,  
ETAP  
Zumtobel  
Schröder  
...

Innovation Meeting – 23/06/2015 – p. 4

## ETEC - LIGHTING

has basic equipment and a partnership with the Light&Lighting group in Ghent for measurements





# ILLO Project

## Integration of Light and Ventilation in the OR



# Surgical luminaires are complex

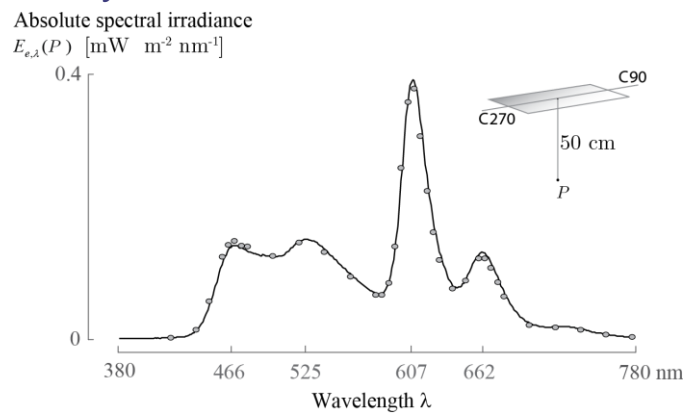


Colored shadows in the task plane can be predicted using spectral ray-files



Innovation Meeting – 23/06/2015 – p. 9

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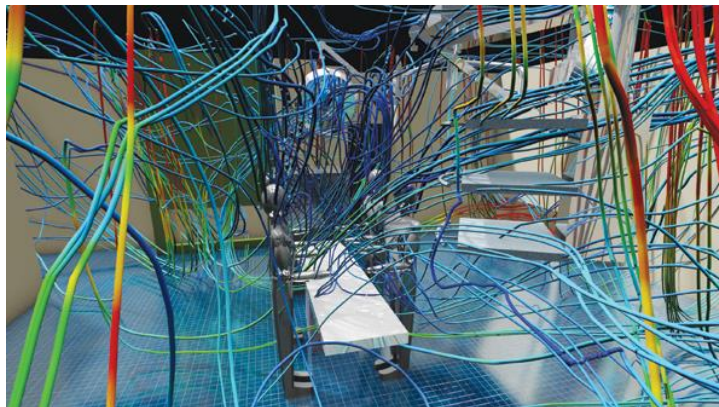
Innovation Meeting – 23/06/2015 – p. 10

In contemporary surgery rooms,  
lighting is mounted below the  
ventilation system



Innovation Meeting – 23/06/2015 – p. 11

The presence of the surgical  
luminaire disrupts the protective  
flow of clean air



Innovation Meeting – 23/06/2015 – p. 12

## Wound infection can occur when pathogenic particles enter the wound



This is disadvantageous for  
 the patient  
 the hospital and medical staff  
 health care

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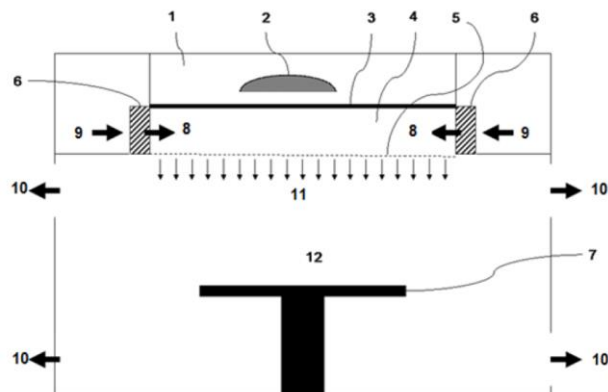
### For example in Europe

29 000 000 surgical procedures per year  
 between 1% and 4% post-operative infections  
 prolonged stay in hospital of about 7 days  
 an estimated cost between 1.5 and 19 billion € per year!



The task of “Project ILLO”  
 is to overcome the negative  
 interaction between the  
 lighting system and the  
 ventilation

An innovative and patent-pending  
 light and ventilation system  
 has been developed





Air flow simulations indicate a particle reduction of 66% at the wound of the patient

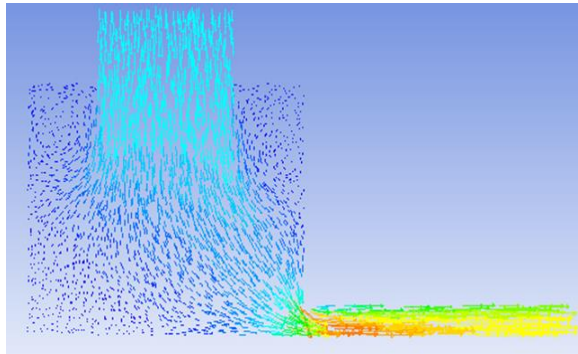


Figure courtesy of Romy Van Gaever

Contact us @



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