



**Triple9** (Patent pending)  
**UVC Decontamination System**

Presentation  
November 02, 2023

# Situation

## Cabin

### decontamination:



Hand Cleaning



Fogging/Spraying



Germ Falcon



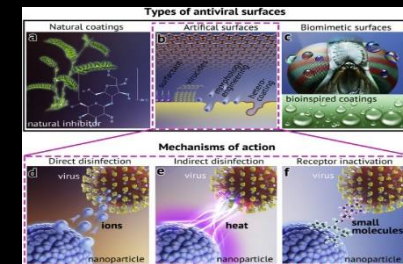
→ Existing solutions  
fall short



Ionisation



UV Light



Antiviral Surface  
Treatment

# Science

## 1. COVID-19- how long it lasts:

SARS-CoV-2, which causes COVID-19, needs a living host to reproduce in. A new study looks at how long it can last outside the body

As aerosol in the air\* Up to 3 hrs



On copper Up to 4 hrs



On cardboard Up to 24 hrs



On plastic 2 - 3 days

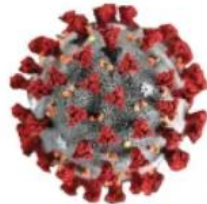


On stainless steel 2 - 3 days



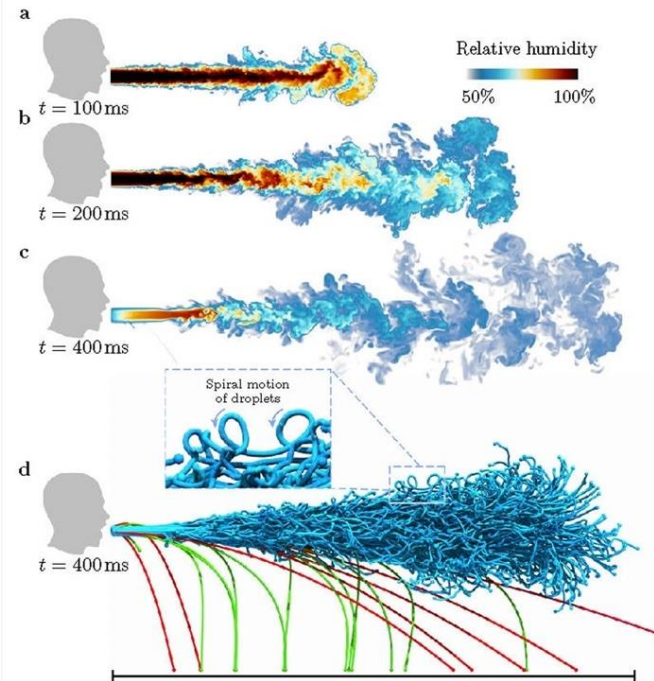
Study and paper by :  
New England Journal of Medicine  
CDC  
Universitis of California, LA, Princeton

\*Researchers used a nebulizer to simulate coughing or sneezing, and found that the virus became an aerosol



→ Virus stays active in A/C up to 28days according to latest studies.

## 2. COVID-19 spreads mainly via aerosols\*:



→ Both air and surfaces must be addressed.

# Solution

## Triple9 UVC System

Automated system:  
no „Human Factor“

Germ- free cabin:  
up to 99.9%  
decontamination of  
air & surfaces

For retro- fits  
or green A/C



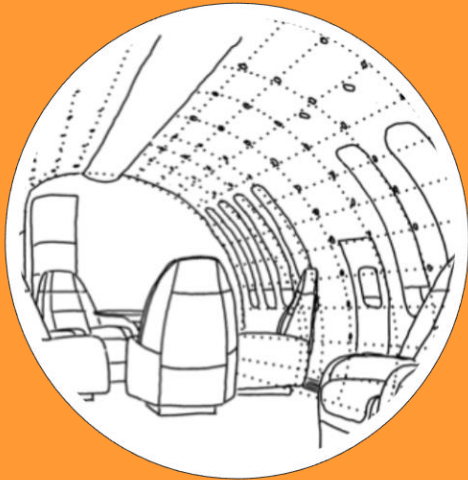
Low design impact

Battery - powered:  
independent from  
A/C home base.

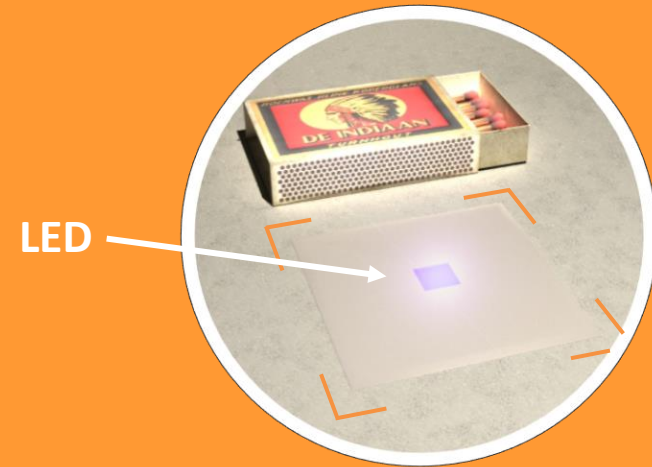
Decontamination time  
air and surfaces: within 2 hours\*

\*For use on ground and in  
absence of people.

# Implementation



**1: Technical integration:**  
3D CAD model to determine cabin specific positioning of LEDs.



**2: Design integration:**  
LEDs with low visual impact to be integrated in custom cabin design.

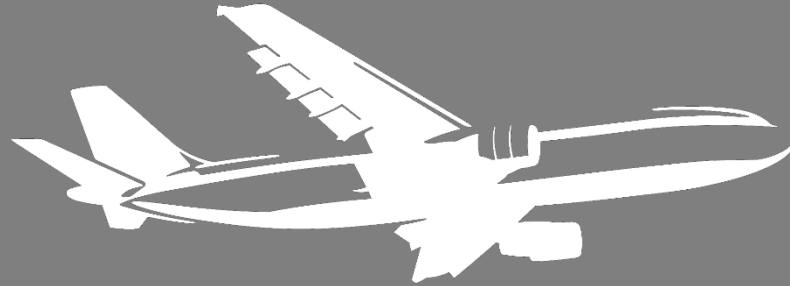


**3: Power integration:**  
External sources possible, but not a must.



**4: System integration:**  
Automated decontamination system

# Applications



Aircraft Cabins



Lavatories

**Triple9**  
UVC System



Galleys



Homes

Boats

# Integration of Triple9 UVC System Overview & Deliverables

## Services include:

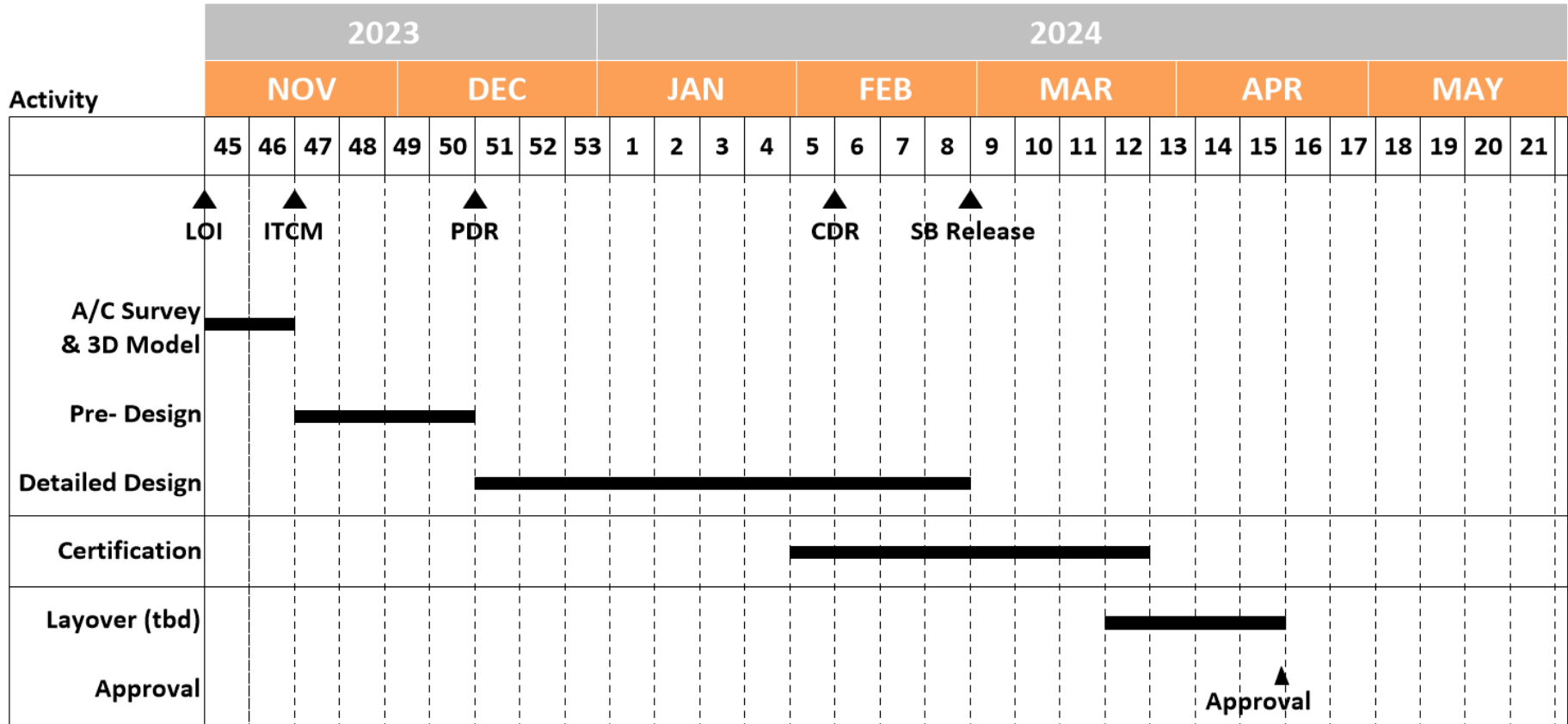
- Survey of existing aircraft cabin & 3D model
- Modification instructions for completion center.
- Certification of the installation/modification.

## Deliverables:

- Renderings depicting visible changes.
- Presentation of lamp design.
- Proprietary UVC LED aircraft interior lamps. (Not included in fees).
- Modification Bill of Material.
- Instructions for Continued Airworthiness (incl. IPC-S, AMM-S).
- Crew Operating Manual.

# Integration of Triple9 UVC System

## Preliminary Schedule





# Integration of Triple9 UVC System

## ROM Pricing

Optional: Survey of aircraft cabin & renderings including all monuments	EUR 50,000.-	ROM
A/C specific development of LED layout and power control	EUR 100,000.-	ROM
Integration LED units and power control	EUR 100,000.-	ROM
Certification of Triple9 lighting system	EUR 150,000.-	ROM
<b>total EUR 400,000.-</b>		<b>ROM</b>
Onsite- Support	EUR 1,000.-/day & person	

Parts and materials and installation not included  
Discounts available for multiple A/C orders

Travel and accomodation costs are not included

Prices are net, excluding VAT

# Contact



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