Smart facades for smart buildings

Olivier Gareil
London, October 2nd 2019

Crédits : Thierry Degen / Terra
«Act so that the effects of your actions are compatible with the permanence of genuine human life»

Hans Jonas

© The imperative of responsibility

In search of an Ethics for the Technological Age
The effects of building
Planet impact

Figure I.1. The world’s urban and rural populations, 1950-2050

Repartition of CO2 emissions by activity (%)

- Housing: 33%
- Transportation: 30%
- Industry: 29%
- Sustainable Construction: 28%
- Repartition of Energy Consumption: 43%
Contribute to the sustainability agenda
Reduces energy consumption up to 40%

Net Zero carbon by 2050: Day 1 for Saint-Gobain

Published on September 25, 2019

Pierre-André de Chalendar

Several days ago, I announced the commitment I am making on behalf of the Saint-Gobain Group: Achieve zero net carbon emissions by 2050. This is in line with the target of limiting global warming to 1.5 °C.
Smart & connected
a tenant amenity

+50% of office workers expect to work in
a "smart office" within the next 5 years*

*Dell & Intel “2016 Future Workforce Study”*
What buildings need
3 main transformations

SUSTAINABILITY & ENERGY SAVINGS
WELL-BEING & COMFORT
SMART & CONNECTED
Controllable heat and light management

ADJUSTABLE TINT LEVELS FOR OPTIMUM OCCUPANT COMFORT

VLT: 60%  g-value: .40  VLT: 18%  g-value: .12  VLT: 6%  g-value: .07  VLT: 1%  g-value: .05
Digital and smart

…an Intelligent Glazing System
PEOPLE BENEFITS

“Real Data”:
Occupant Survey

50% said SageGlass **SIGNIFICANTLY enhances** general well-being

80% said SageGlass **ENHANCES satisfaction** across **all** criteria

91% said SageGlass **ENHANCES ability** to concentrate

SageGlass® survey of 134 Glatt HQ employees in Binzen, Germany
Outcomes

Smart buildings

• Maximize usable floor space
• Block up to 97% of solar heat
• Reduce carbon footprint
• Reduce energy by up to 40% and peak energy by 25%
• Downsize HVAC for Capex savings
• Contribute to green labels
• Enhance Comfort & Experience
Pay-back
A considerable source of profit

Figure 2: Typical Business Operating Costs
Take away

• **Responsibility!**

• **Chose the solution that suits your project**
  - 18 m long
  - Artistic frit design
  - Colourful blinds
  - Double skin
  - ….

• **Smart glass** is ready, safe, and delivers exceptional value
Let’s build smart façades for our planet!