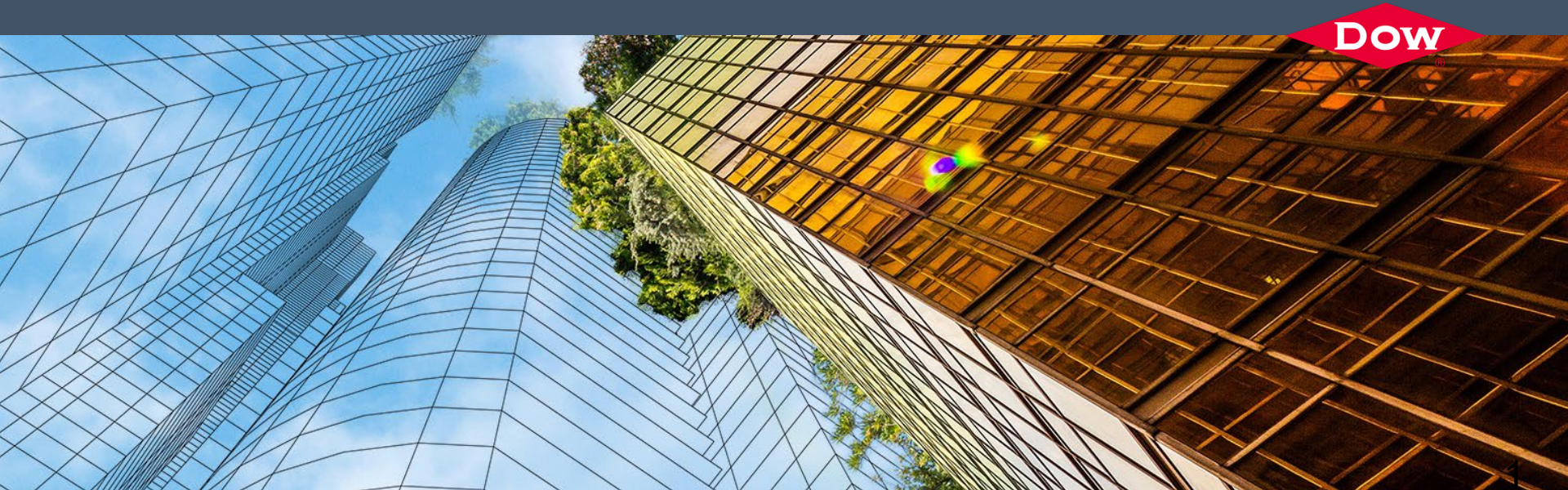
Decades of Performance:
The Evolution of Sealants in Glazing



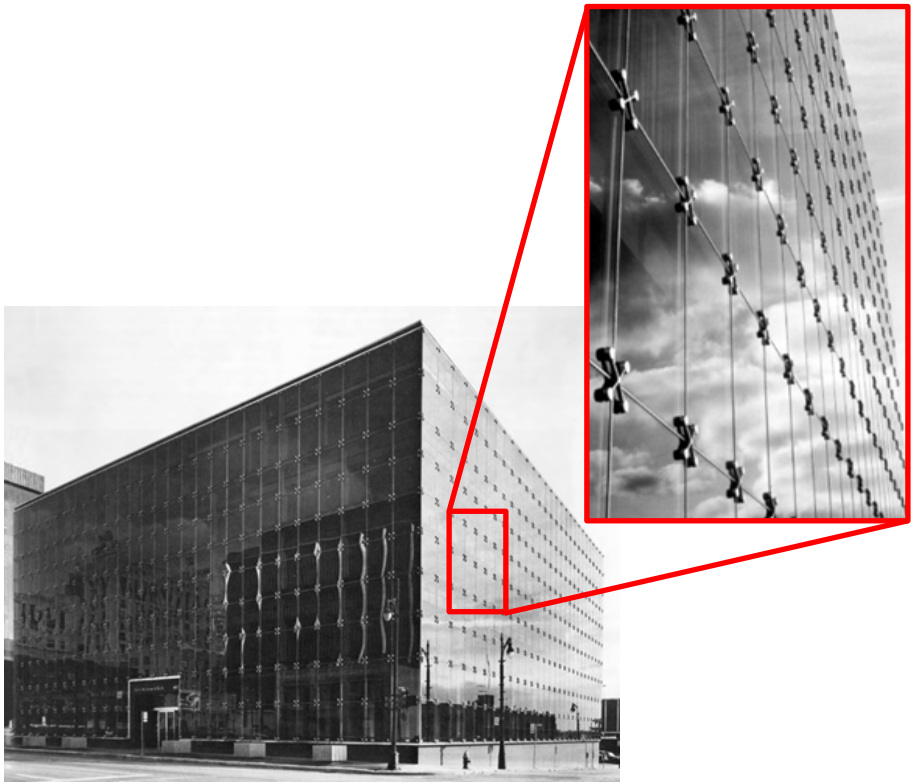
First 4-Sided Structural Glazing Project

- Cass Building in Detroit, MI
- Designed by Smith, Hinchman & Grylls (now SmithGroup)
- Built in 1910

- Originally constructed as a warehouse on Detroit's west side

Updated Facade

- SH&G purchased building in 1970 and completed façade renovations in 1971
- Building was stripped to its original concrete superstructure and fitted with aluminum frame and monolithic glass
- Initial concerns by code officials about the retention of the glazing prompted the addition of spider fittings to give appearance of mechanical retention
  - Likely assisted in holding glass in place while sealant cured
  - SH&G indicated that the fittings also enriched the façade of the building



Proven Glazing Performance – Mock-up

- Full size assembly taken to failure
- ASTM E330 up to 72 psf
- Only the center portion was destroyed
- Silicone sealant retained the glass along the perimeter
- Illustrates no need for spider fittings

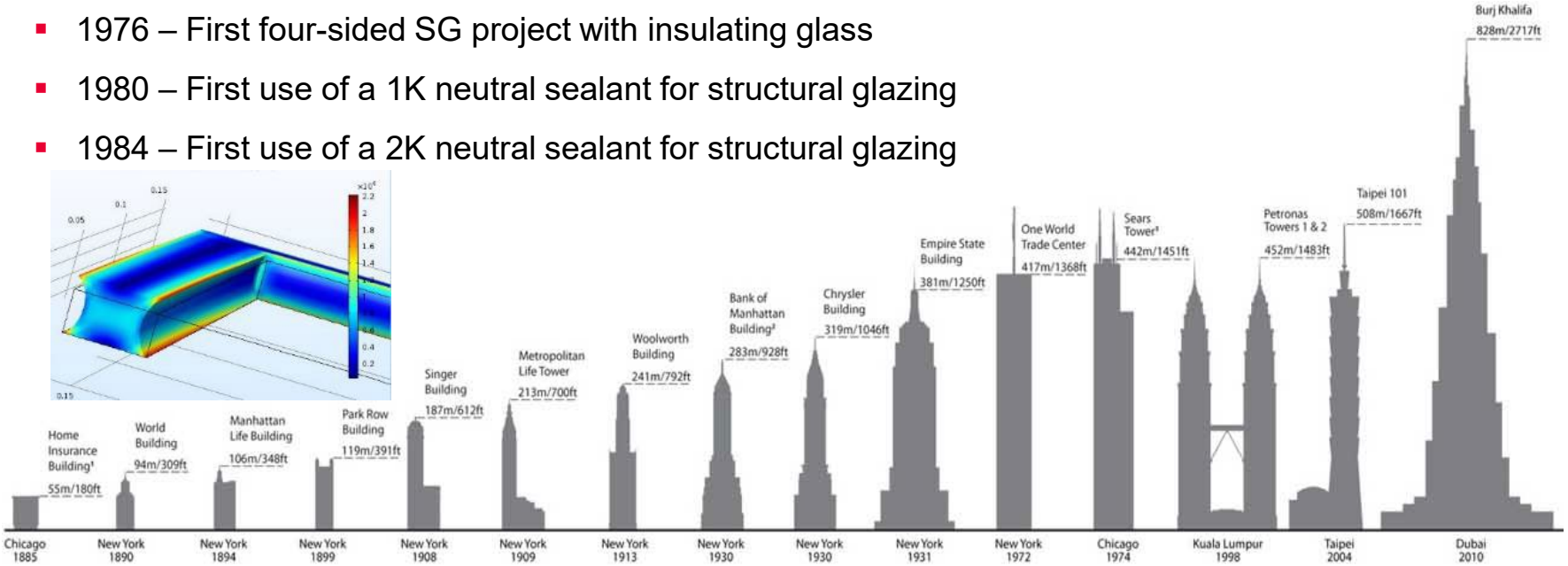
STILL PERFORMING TODAY

- Experience average yearly temperatures between 17 and 82ºF
- High of 104ºF in June 1988
- Low of -20ºF in January 1984

- Average rainfall of 9”
- Wind gusts between 9 and 24 mph
- 80 tornadoes in the vicinity of the building

History of Silicone Structural Glazing (bonding)

- 1964 – First silicone SG projects using glass fin as structural support
- 1968 – First two-sided SG project with mechanical fixation on two sides
- 1971 – First four-sided SG project which used silicone for full attachment of glass
- 1976 – First four-sided SG project with insulating glass
- 1980 – First use of a 1K neutral sealant for structural glazing
- 1984 – First use of a 2K neutral sealant for structural glazing



Seek

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