

Increasing importance of Application Engineering in the North American Tower Crane Industry

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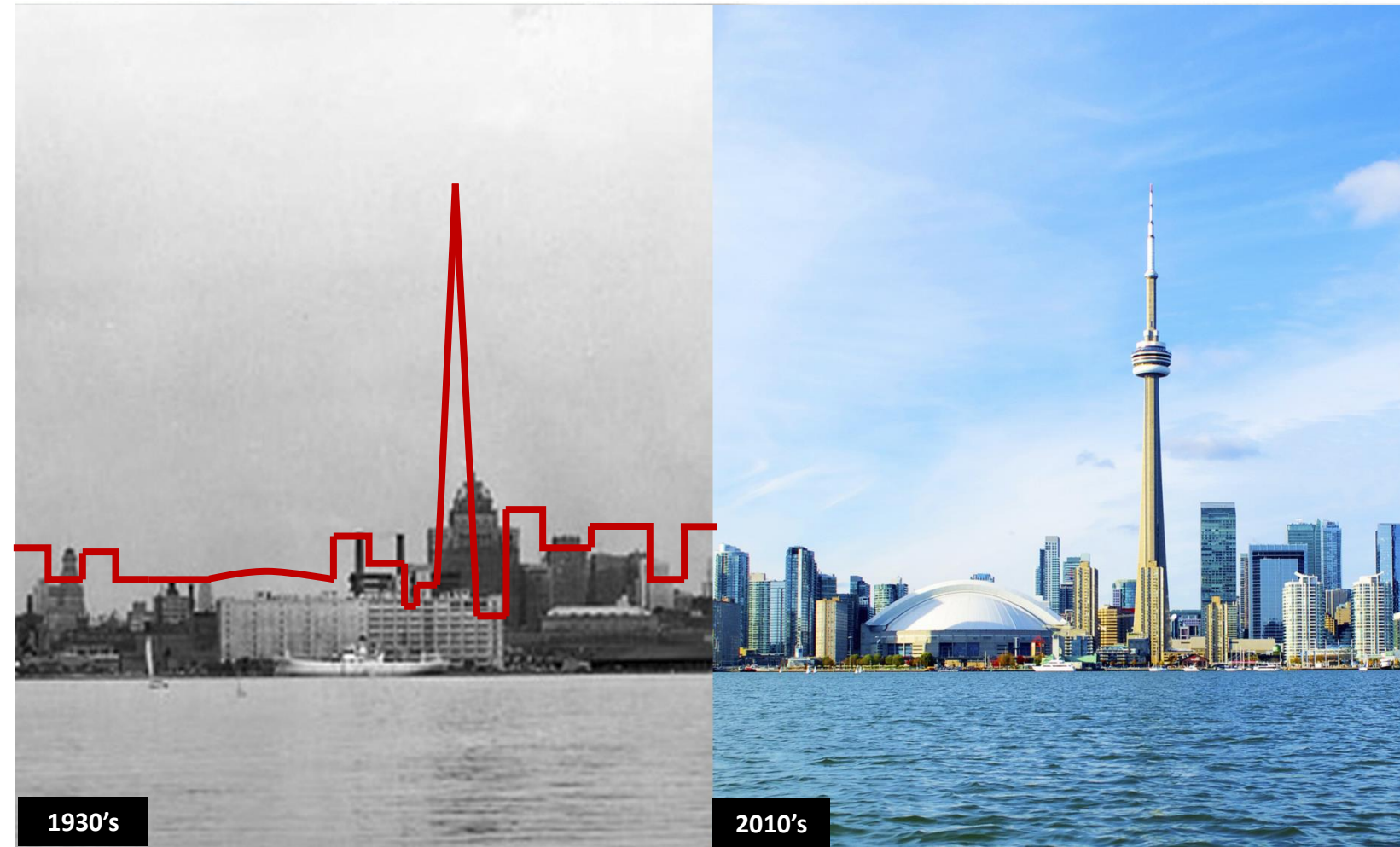
Miami, June 19th



Application Engineering: beyond new products development, providing engineering solutions through the lifecycle of our equipment and enabling new challenges in building design and construction



North America cities evolved consistently during the last decades...



Meaning:

- Heights
- Distances
- Weights
- Traffic/Logistics
- Timing/Schedule
- Regulations
 - Urban needs
 - Noise Limits
 - Pollution etc...

Support prior and during the construction

- Mast composition
- External climbing
- Internal climbing
- Reduced parking radius
- Cranes set-up / Job site layout
- Seismic analysis



Develop advanced solutions...



Grillage at 787ft
(240m) height

“...a final crane – at the time, the tallest ever built in Britain – was erected to install the skyscraper's upper spire.” (*)

(*) [The Shard - Wikipedia](#)

Tethered Jib

a platform has been designed for resting a jib on the tower of a close crane

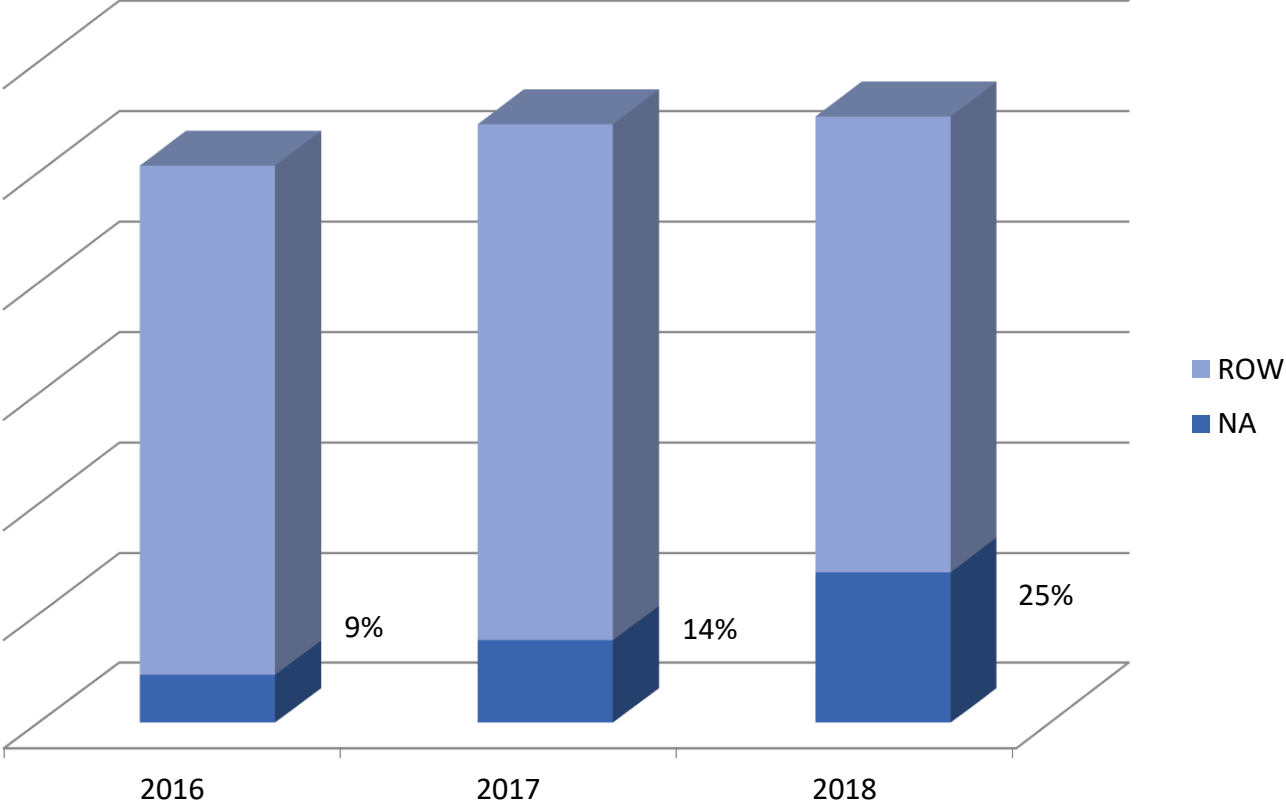


...and special applications



Big luffing crane on special pedestal (oil & gas offshore platform)

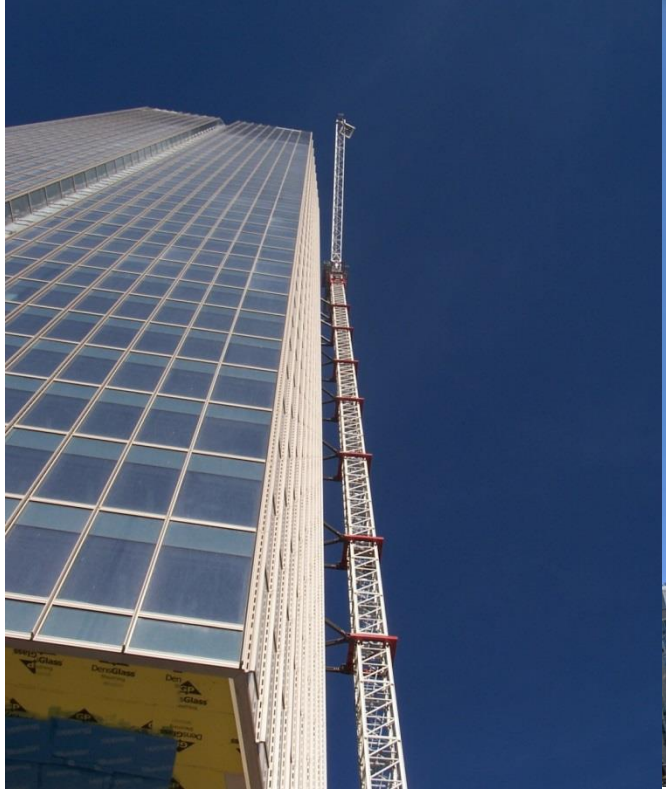
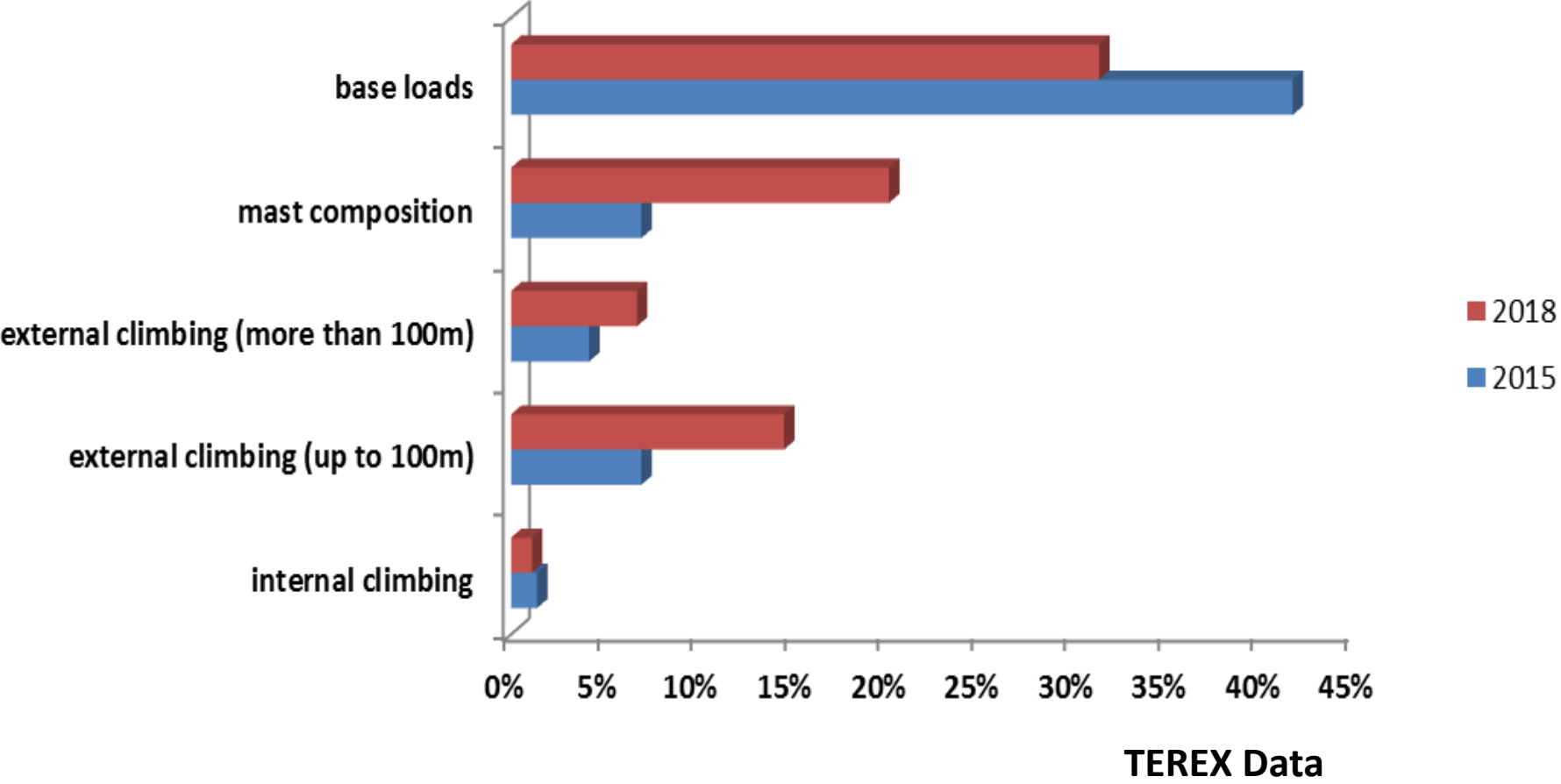
Application Engineering activity in North America



TEREX Data



Application Engineering activity in North America



Virtuous Cycle

New ideas and projects that force Construction Industry to develop and adapt to the **new challenges**

Job site lay-out and lifting plan becoming every year more demanding

Construction Industry

Building Design

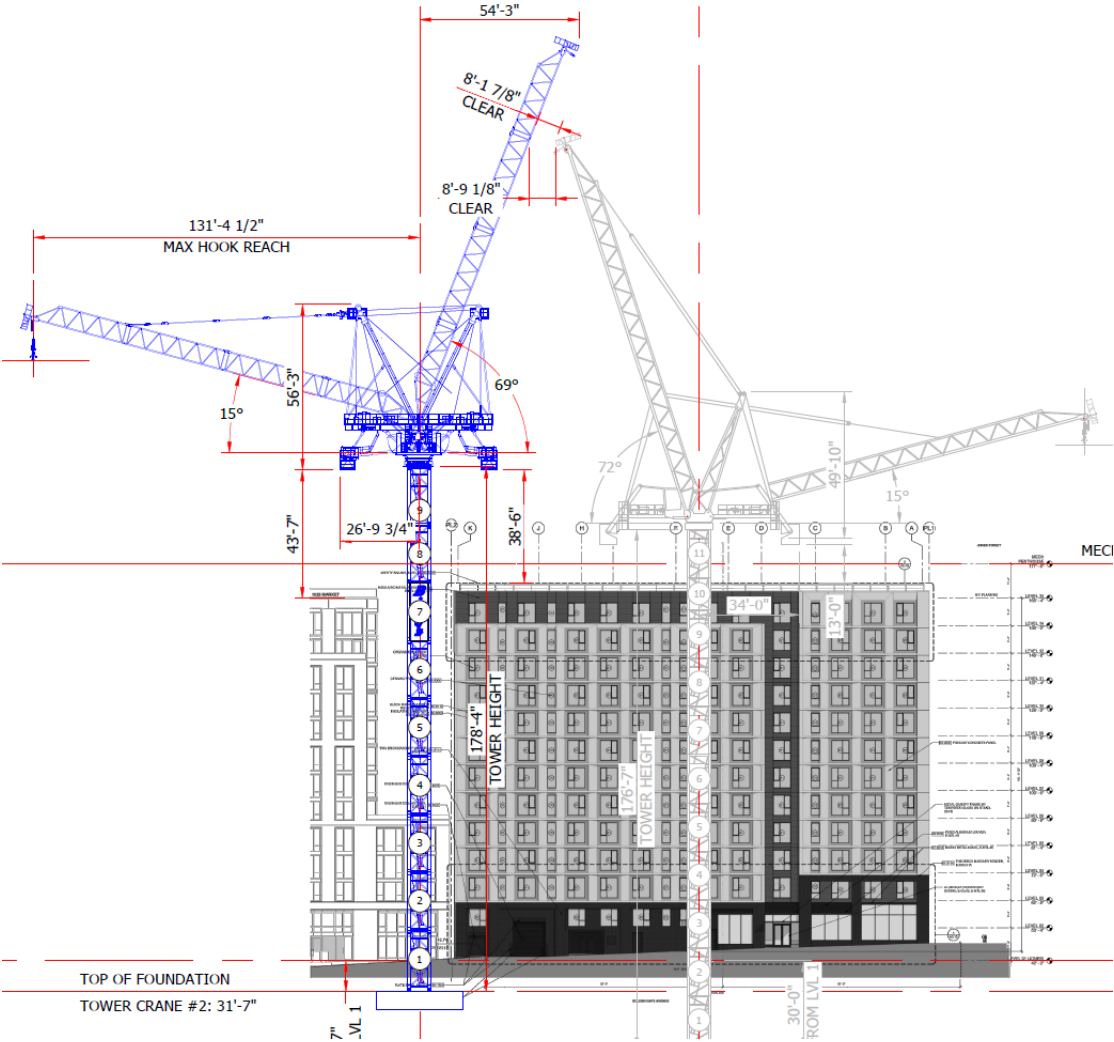
Cranes Industry

Ability to cover different needs with **advanced solutions** pushes new ideas

Challenging building shapes

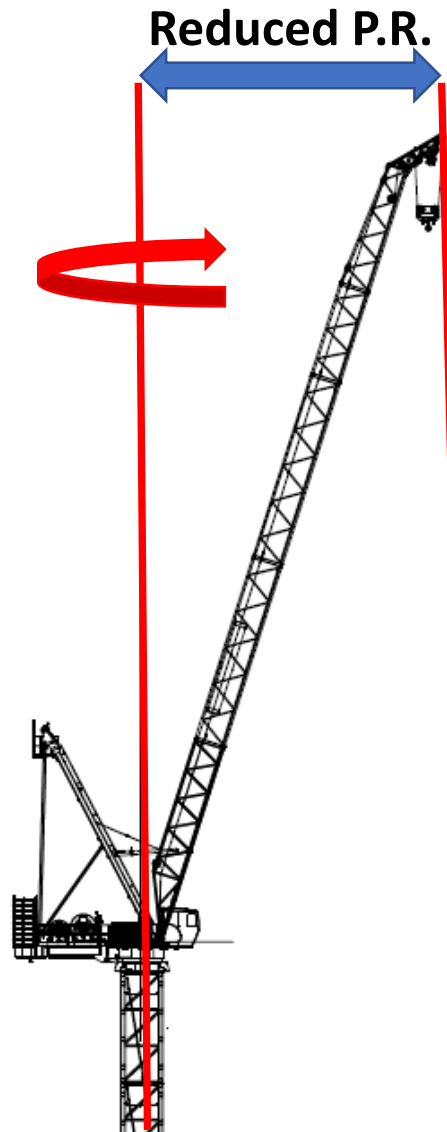
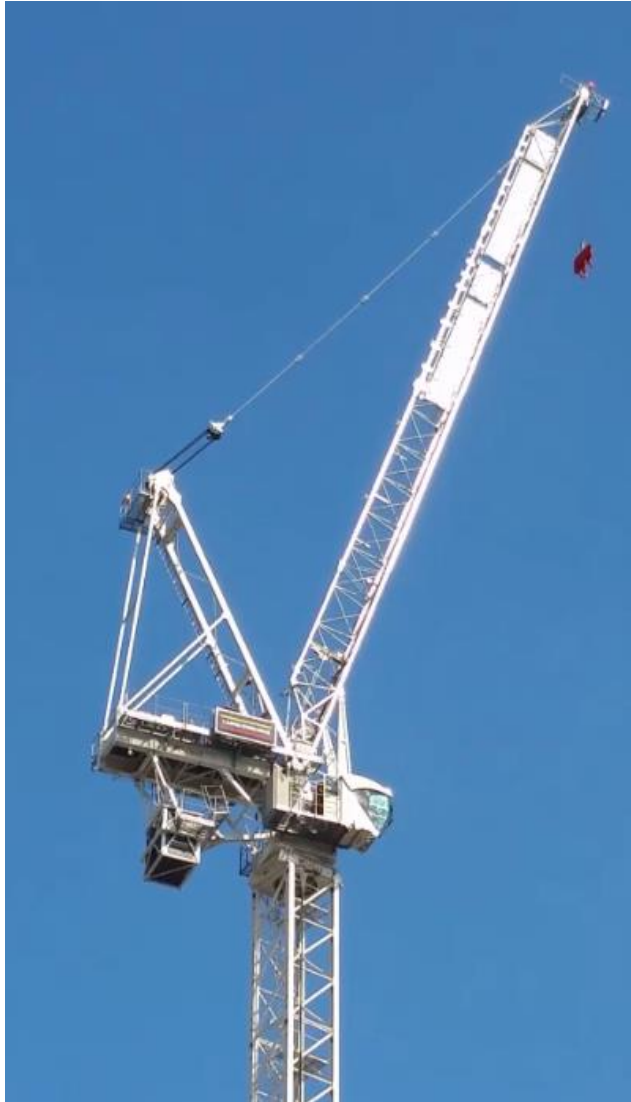


Challenging constrained spaces



Continuously exchanging data and information

New needs → New Solutions → New Product development



Improved Engineering to get short out-of-service parking radius for standard configuration

Being partners...

Working closely together enhances our performances driving the best return in every job site we are





Not only buildings but monuments

Let's take new challenges

Thank you