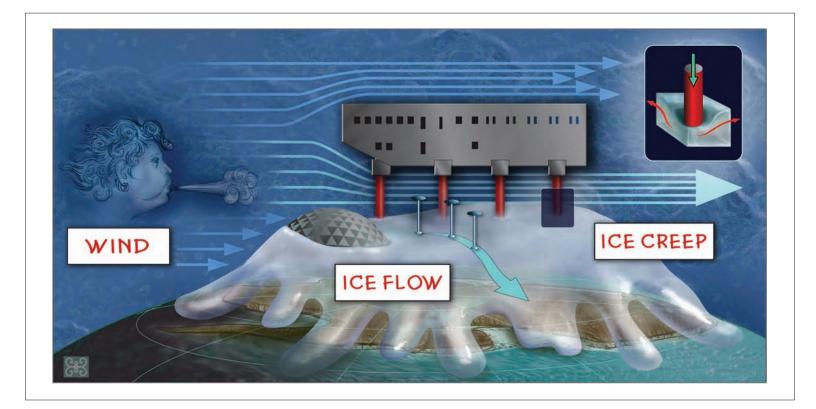
## CHALLENGES THAT FACE SOUTH POLE ARCHITECTURE



## WIND

- \* Constant winds result in snow pile-up on buildings.
- \*The new station faces into the wind, and is airfoil-shaped.
- \*The airfoil forces air into a compressed space where it accelerates.
- \*The fast wind scours out built-up snow.
- \*Years later, if snow still builds up, the building can be lifted two more stories on its columns.

## **ICE FLOW**

- \*The station sits atop a 2-mile deep layer of ice.
- \*Each year, the geographic South Pole is marked.
- \*Ice (cold water), slowly drips down to the ocean with gravity.
- \*The trail of yearly South Pole markers shows that the ice moves 33'/yr.

## **ICE CREEP**

- \*The weight of the building also causes the ice to move locally.
- \*Ice compresses and shifts away from sources of pressure.
- \*Resulting variable rates of sinking make keeping the building level a challenge.
- \*Architectural elements built into the design will help meet that challenge.

