



An overview on deployable structures enabling advanced CubeSat missions

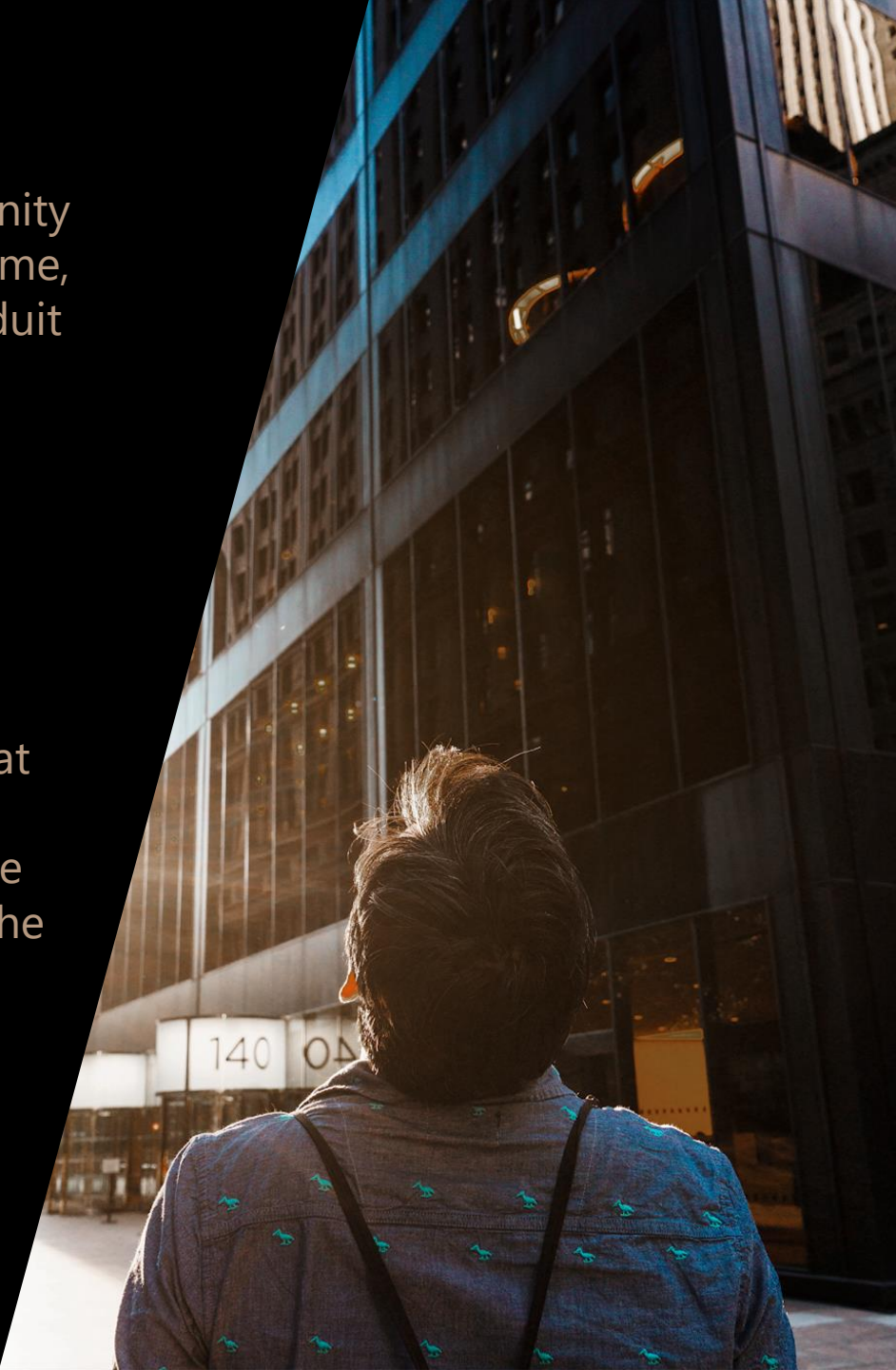
Dr. Thomas Sinn,
CEO Deployables Cubed GmbH

Our Vision

To power humanity for worlds to come, and be the conduit for a cleaner tomorrow.

Our Mission

To develop innovative technologies that are pushing the boundaries while only physics is the limit.



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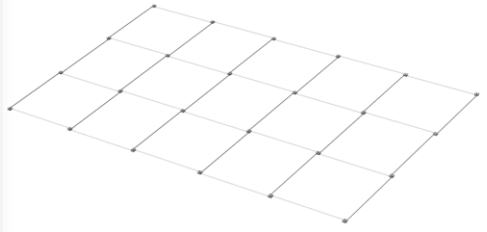
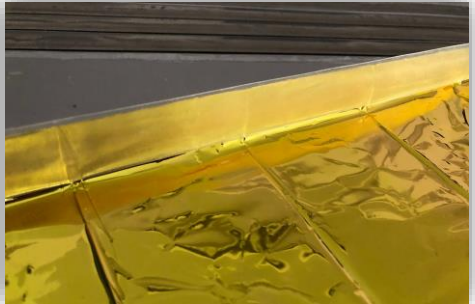


Zusammen.
Zukunft.
Gestalten.

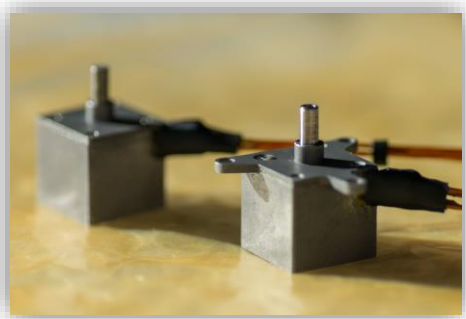
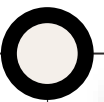
Our Cube Sat Enablers



- D³DB** Deployable Boom
- D³DS** Deployable Substructure
- D³PC** Deployable Solar Array (PowerCube)

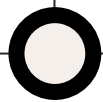


Phase 1 The Component



- D³PP** Pin Puller (3 sizes)
- D³RN** Release Nut

Phase 2 The Sub-System

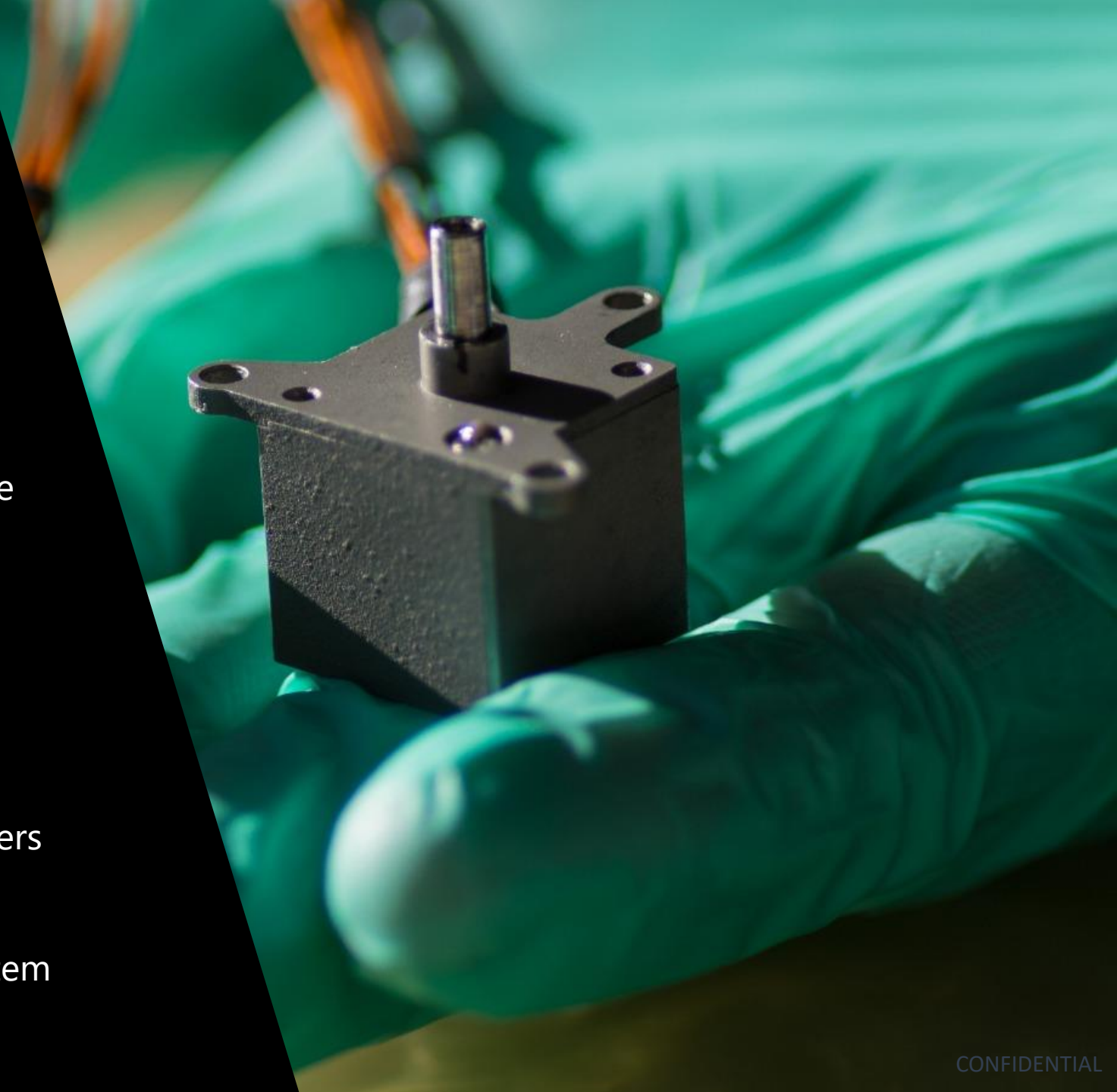




Component: Actuators

D³PP & D³RN

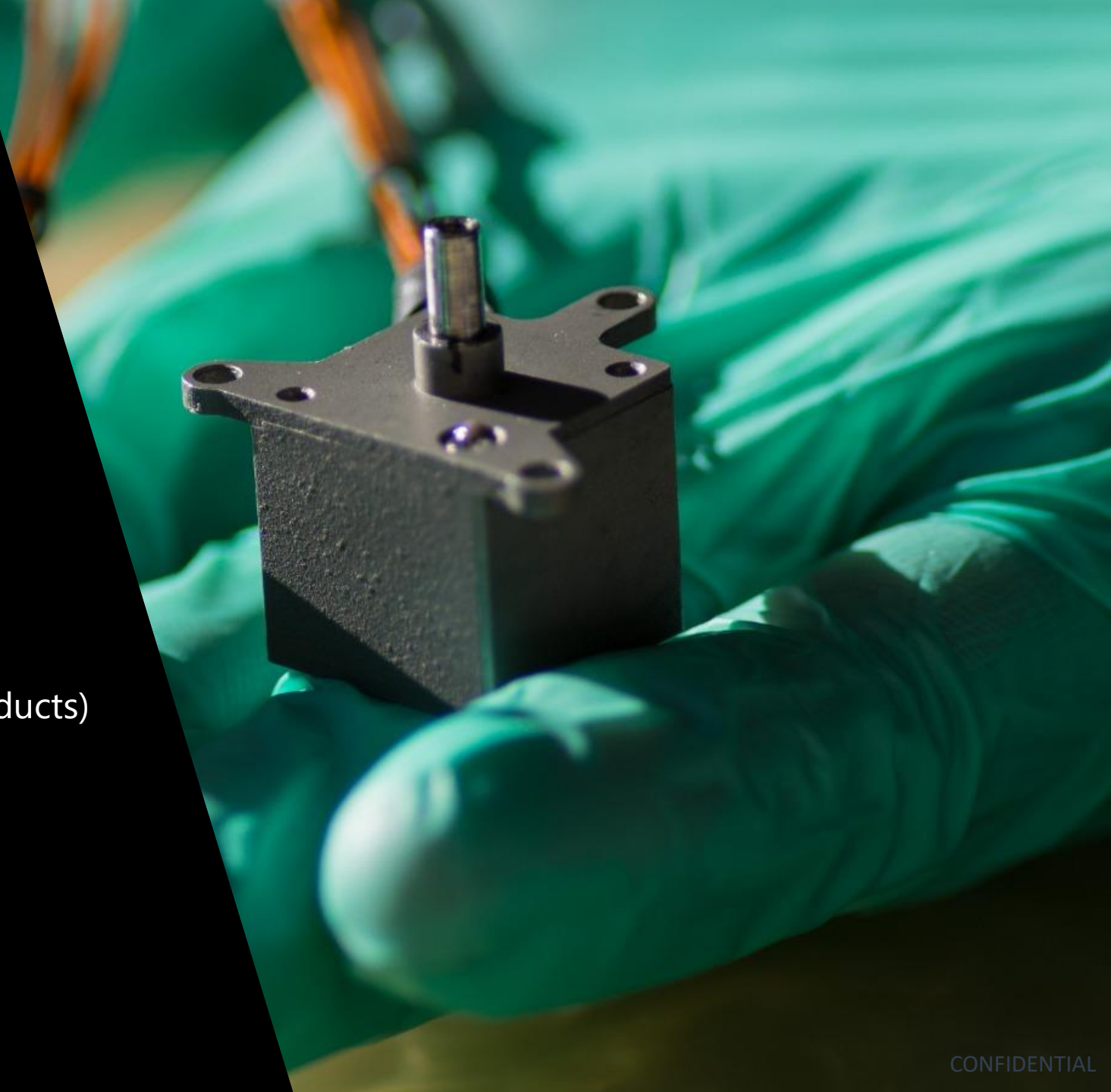
- Novel Actuation Principle, Pin Puller and Release use same patented technology
- Pin Puller (D³PP) as well as Release Nut (D³RN), available in various sizes
- Patenting Pending (filed in 02/2020)
- First two actuators (nD³PP) delivered to customers in US & New Zealand in 01/2020 and 02/2020
- Essential to have in house for economic subsystem development.





USPs of Actuators

- Smaller (then anything available in Europe)
- Cheaper (then any available worldwide)
- Export-regulation free (no EAR/ITAR like US products)





Subsystem: Deployables

D³DB, D³DS, D³PC

- Deployables (unfolding structures) could be booms, substructures for antennas or radiators or solar arrays.
- Deployment using stored energy, the deployment only needs to be triggered one (like an umbrella).
- Strong heritage in team on deployables.
- Breadboarding currently ongoing with deployable boom (D³DB) forming deployable substructure (D³DA) and then deployable solar array (Power Cube) (D³PC)
- Input from industry on possible applications welcome.



USPs of Deployables

- Commercial Off The Shelf (COTS) Product
- Short Lead Time (ready within days and not months/years)
- Cheaper (focus on NewSpace/Nanosat customer)
- Excellent Customer Service

Thank you!
Do you have any questions?

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