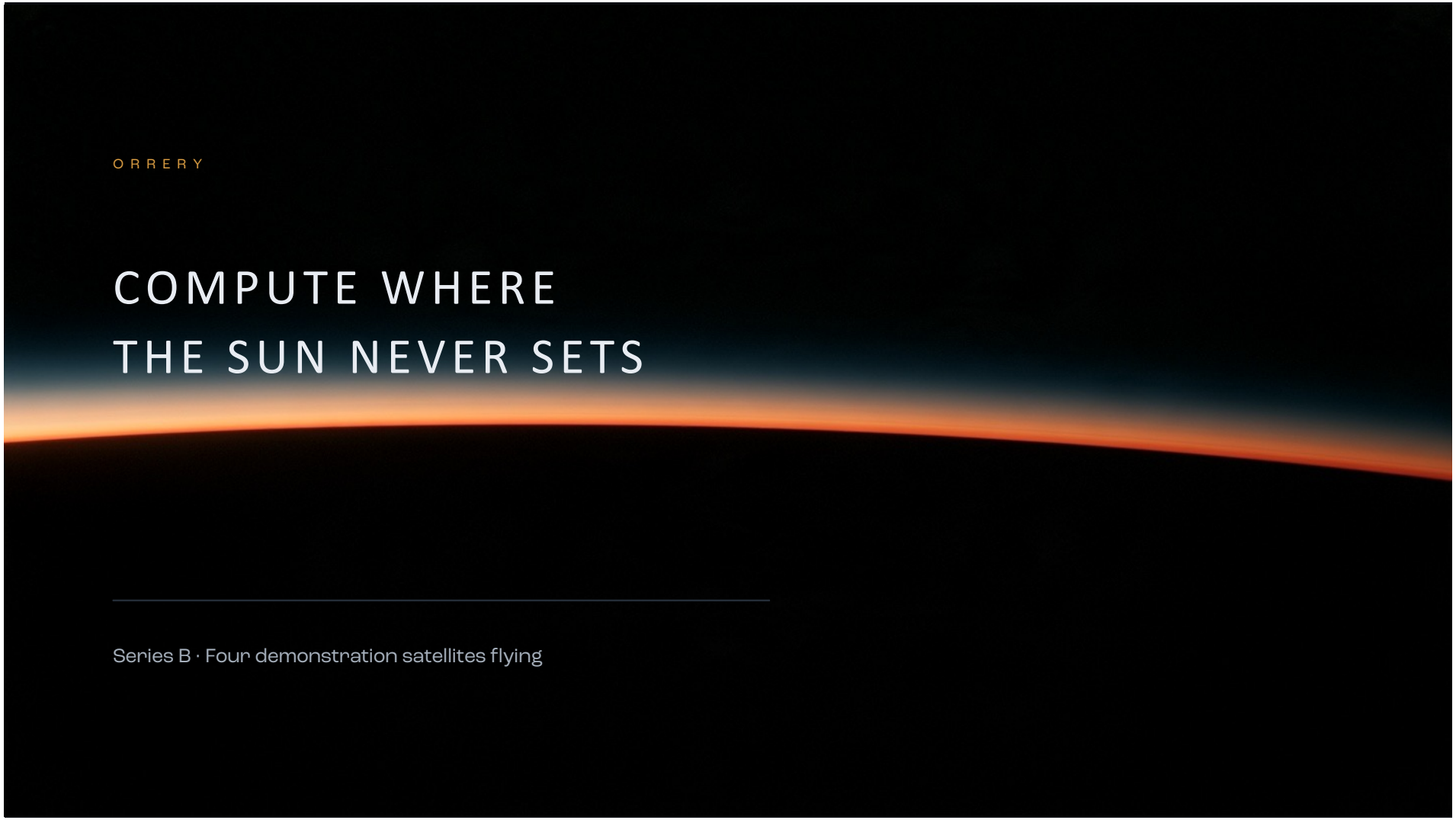

ORRERY
COMPUTE WHERE
THE SUN NEVER SETS
Series B · Four demonstration satellites flying

THE PREMISE

A DATACENTRE HAS THREE PROBLEMS. ORBIT REMOVES TWO OF THEM.

POWER

SOLVED

Continuous sunlight. No night, no seasonal curve, no storage.

COOLING

SOLVED

Heat leaves by radiation. Not a drop of water is consumed.

MASS TO ORBIT

NOT SOLVED

The one we are paying for — and the only one getting cheaper on its own.

Two of the three are physics and they are already won. The third is a price, and prices move.

WHAT A TERRESTRIAL SITE COSTS

THE BILL NOBODY PUTS ON A SLIDE

1,900

acres for a gigawatt campus



4.2M

litres of water per day



7 yrs

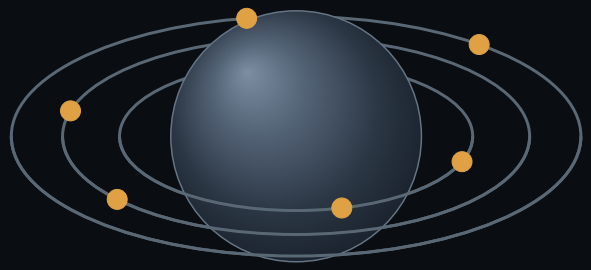
median grid interconnect wait



Every one of these is a negotiation with a community, a utility and a regulator, and none of them are getting easier.

SECTION 01

THE PHYSICS



Three things are true in orbit that are not true on the ground. Two of them help.

CONTINUOUS SOLAR

In a dawn–dusk sun-synchronous orbit a spacecraft is illuminated for essentially the whole year.

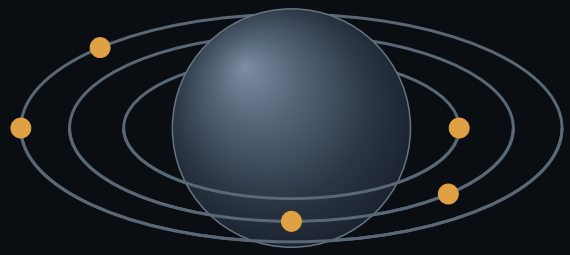
TERRESTRIAL, A GOOD SITE — 24 HOURS



DAWN–DUSK SSO, 550 KM — 24 HOURS



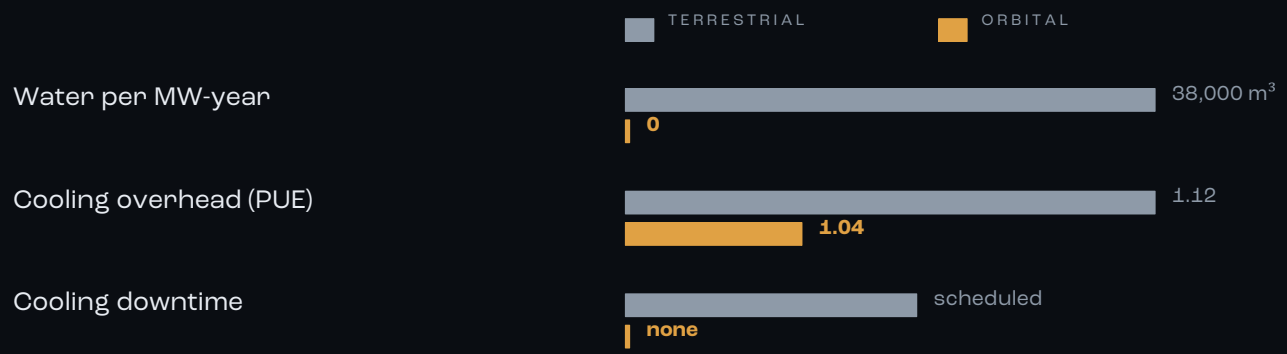
5× the annual energy of the same panel in a good terrestrial location



NO NIGHT · NO SEASONAL CURVE · NO STORAGE

COOLING WITHOUT WATER

Vacuum has no convection, so heat leaves only by radiation — which sounds like a problem and is in fact the design. A radiator facing deep space sees a 3 K sink and rejects heat continuously, with no working fluid consumed.

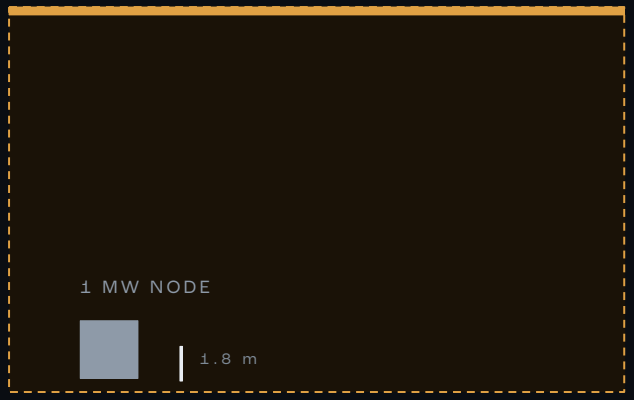


The first row is the one a siting committee cares about.

RADIATORS ARE ENORMOUS

Rejection scales with area and the fourth power of temperature, so a megawatt of compute needs a radiator measured in hundreds of square metres. Deployable structure at that scale is the hardest engineering problem in this company.

640 m² · RADIATOR PER MEGAWATT, DRAWN TO SCALE



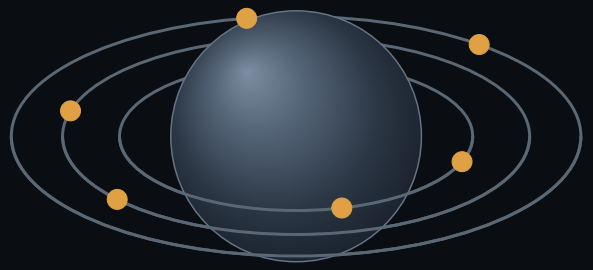
≈ 2.5 tennis courts, per megawatt, unfolding itself in vacuum

We would rather you heard that from us on slide seven than found it on your own.

WHERE MOST OF OUR RISK SITS

SECTION 02

WHAT WE HAVE FLOWN



Four demonstrators, twenty-two months on orbit, and one failure we will describe in detail.

FLIGHT HERITAGE

FOUR DEMONSTRATORS

ORR–1

Mar 2024 · 180 kg

PEAK POWER

9 kW

Deorbited as planned

ORR–2

Nov 2024 · 340 kg

PEAK POWER

48 kW

Operational, 21 months

ORR–3

Jun 2025 · 620 kg

PEAK POWER

140 kW

Operational, 14 months

ORR–4

Feb 2026 · 980 kg

PEAK POWER

310 kW

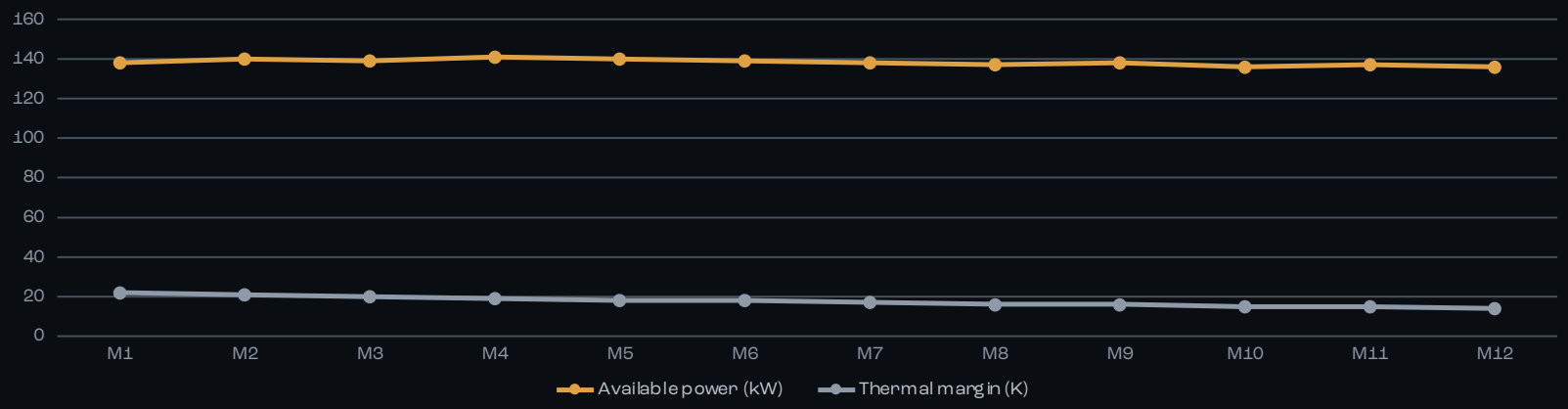
Commissioning

Cumulative on-orbit compute delivered to paying customers: 41,000 GPU-hours.



TELEMETRY · ORR-3, TWELVE MONTHS

IT BEHAVES THE WAY THE MODEL SAID



Thermal margin is degrading roughly 0.7 K per month. Extrapolated, ORR-3 loses margin at month twenty-eight — which is why ORR-5 carries a different coating.

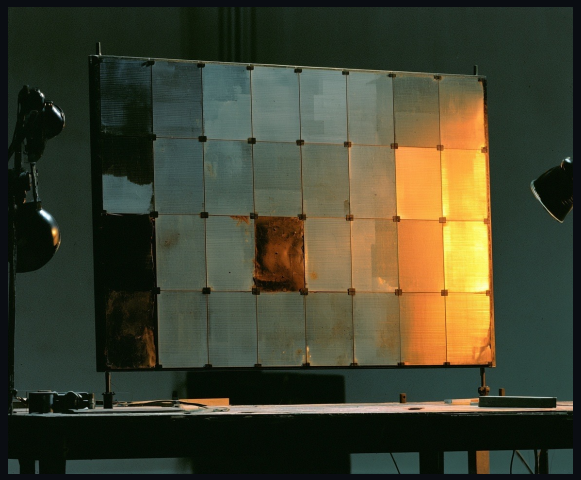
THE FAILURE

ORR–2 LOST A RADIATOR PANEL

SIX DEPLOYABLE RADIATOR PANELS





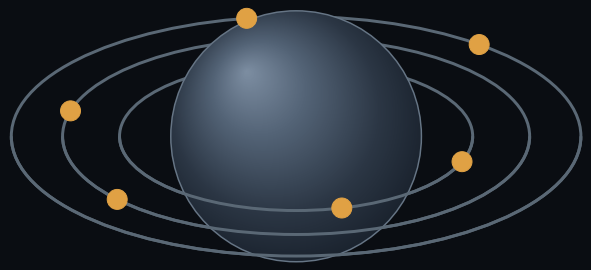


One of six deployable panels failed to latch nine weeks after commissioning. Root cause was a thermal-cycling fatigue mode we had tested for at the wrong duty cycle.

EVERY INVESTOR ASKS WHAT BROKE. THIS IS WHAT BROKE.

SECTION 03

THE CONSTELLATION

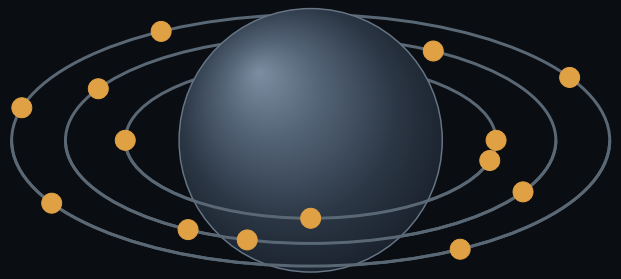


What we build with the money, and what it costs per delivered petaflop-hour.

ARCHITECTURE

FORTY NODES, ONE PLANE, ONE GROUND GATEWAY

Each node is a 1 MW compute module with its own power and rejection. Nodes are linked optically within the plane, so a job can span the constellation without touching the ground. One gateway serves the whole plane on a 14-minute contact per orbit.

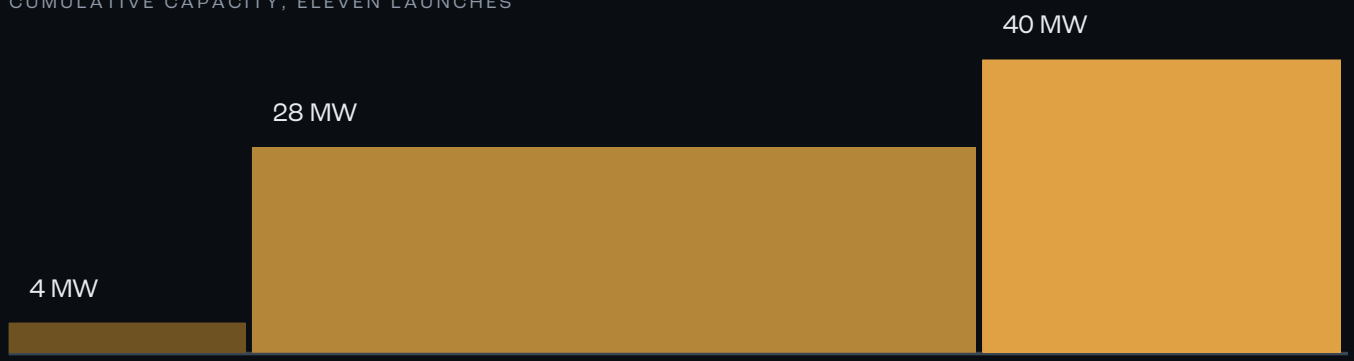


40 NODES · ONE PLANE · 550 KM

LAUNCH CADENCE

FORTY NODES IN ELEVEN LAUNCHES

CUMULATIVE CAPACITY, ELEVEN LAUNCHES



Pathfinder
2 LAUNCHES
4 NODES
Q1–Q3 2027

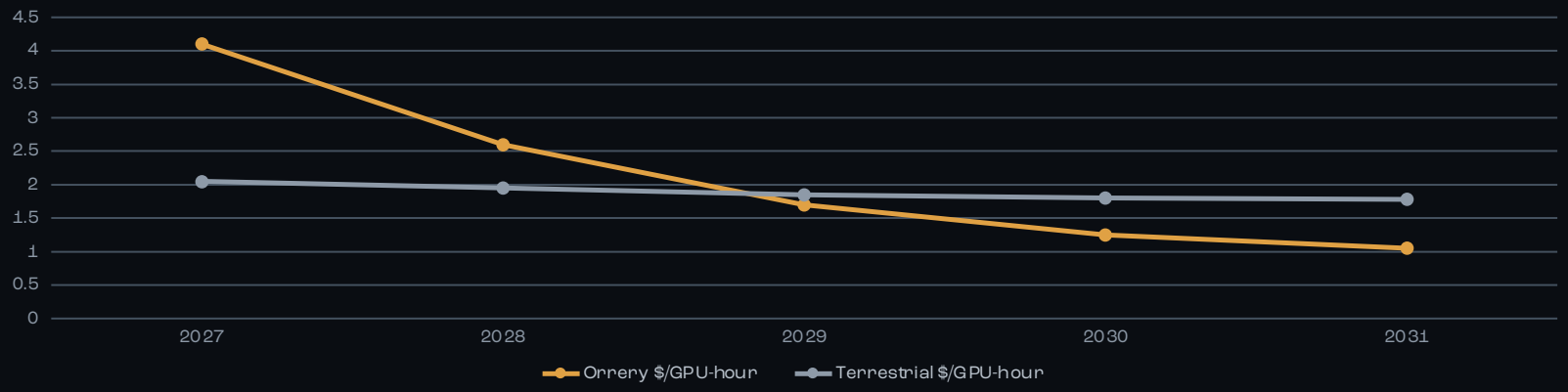
Build-out
6 LAUNCHES
24 NODES
2028

Completion
3 LAUNCHES
12 NODES
H1 2029

Launch is contracted at a fixed price per kilogram through 2029 with two providers. The cadence, not the physics, is what puts service entry in 2027.

UNIT ECONOMICS

WHERE THE CURVE CROSSES



We are more expensive until 2029. Any investment thesis here is a thesis about the two years after the crossing, not the three before it.

WHAT THIS IS NOT FOR

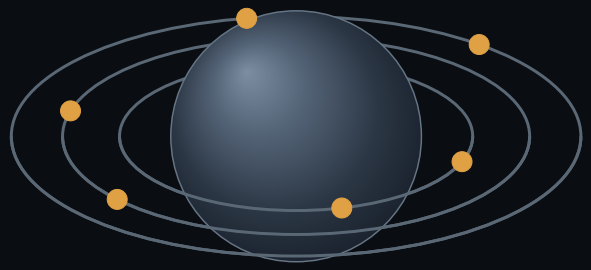
LATENCY RULES MOST OF THE MARKET OUT

Large-scale training runs	Scientific simulation	Batch inference	Interactive inference	Anything transactional
SUITABLE	SUITABLE	SUITABLE	NOT SUITABLE	NOT SUITABLE
Batch, latency-insensitive, weeks long	Queued and tolerant of contact windows	Where a 40-minute turnaround is acceptable	Contact windows make this impossible	Do not put a database up here

Two of five are a no. The addressable market is the first three and it is large enough — but a deck that claimed all five would be lying.

SECTION 04

THE REGULATORY PATH



Three approvals, none of them novel, all of them slow.

REGULATORY

THREE FILINGS, SEQUENTIAL



Spectrum, gateway band ITU / NATIONAL		CRITICAL PATH
Launch licence NATIONAL		NOT ON CRITICAL PATH
Debris mitigation plan NATIONAL		NOT ON CRITICAL PATH
Export control classification NATIONAL		NOT ON CRITICAL PATH

Spectrum coordination is the schedule risk. It is eighteen months of process that cannot be shortened with money, and we have not modelled it as though it could.

END OF LIFE

EVERYTHING WE PUT UP COMES DOWN

Every node carries propulsion sufficient for controlled deorbit and is designed to demise fully on re-entry. Disposal is budgeted at end of life, not deferred.

PASSIVE DECAY FROM 550 KM, PROPULSION FAILED



7 yrs

design life

< 4 yrs

passive decay, worst case

100%

demise fraction, modelled

SCHEDULE

FROM HERE TO FIRST REVENUE

Q4 2026	ORR–5, new radiator coating	
Q1 2027	Pathfinder launch one	
Q3 2027	First anchor customer workload	FIRST REVENUE
Q2 2028	16 nodes, 16 MW	16 MW
H1 2029	Constellation complete	40 MW

Everything before Q3 2027 is spending. Everything after it is a curve.

THE ASK

$340M

Series B

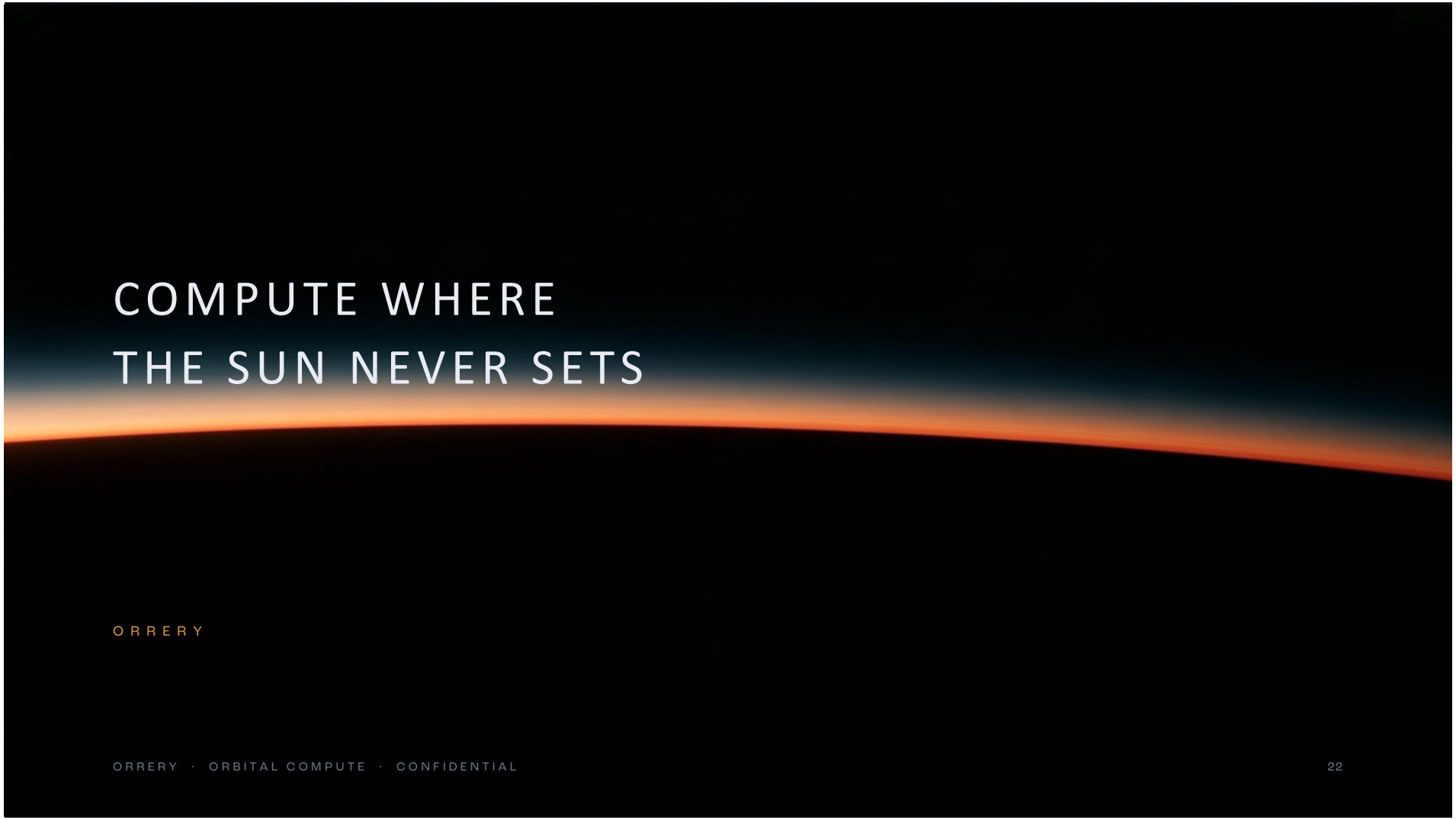


Vehicle build
nodes five through sixteen

Launch
contracted, fixed price per kilogram

Ground segment
and spectrum coordination

RUNWAY TO FIRST REVENUE, PLUS ELEVEN MONTHS


COMPUTE WHERE
THE SUN NEVER SETS
ORRERY

COLOPHON

ORRERY is a fictional company invented for the purpose of demonstrating presentation design. Every vehicle, telemetry figure, cost, schedule and regulatory status in this deck is invented. The physics is broadly real; none of the numbers are.

Display set in Termina, tracked wide throughout. Everything containing a number is set in Roc Grotesk. This is the only dark deck in the portfolio, which is why it lands.