S03E18 - Space Hotels Are Here (Sort Of)

The Multiverse Employee Handbook - Season 3

The *Multiverse Employee Handbook* has this to say about **space tourism**:

It is what happens when a species looks at the infinite void, feels a profound sense of wonder, and immediately asks about pricing tiers.

Space tourism promises weightlessness, perspective, and the kind of awe once reserved for philosophers and astronauts.

Operationally, space tourism occupies an unusual niche. It is neither exploration nor science, but something closer to *cosmic leisure*. The rockets are real, the risks are genuine, and the existential implications are profound, yet the experience is often summarized as “worth it” by people who did not have to tighten the bolts themselves

The Handbook notes that while earlier explorers returned from space quietly changed by what they had seen, modern visitors are more likely to ask whether the station will have good lighting for selfies. The universe may be vast and humbling, but it now competes with engagement metrics.

In summary, space tourism is a reminder that when given access to the stars, humanity will not immediately seek meaning, wisdom, or answers—but will first ask where the window seat is, whether snacks are included, and if the experience can be posted online before reentry.

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You’re tuned into The Multiverse Employee Handbook.

Today, we’re exploring space hotels—the orbital real estate ventures that promise to turn the final frontier into the ultimate weekend getaway, assuming you have millions of dollars in loose change, and a willingness to use a toilet that requires an engineering degree to operate.

We’re examining how humanity went from “one small step for man” to “one overpriced stay for the extraordinarily wealthy,” using science, economics, and the kind of logic that only makes sense if you’ve ever looked at the phrase “luxury accommodation in hard vacuum” and thought it sounded relaxing rather than alarming.

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But first, gather ‘round the orbital hospitality suite, my gravity-optional colleagues, for a tale that would make even the Ritz Carlton’s management team question their commitment to customer service excellence.

In the fluorescent-lit realm of Quantum Improbability Solutions, specifically in the Department of Orbital Hospitality Services—which existed in a superposition of “revolutionary venture” and “catastrophic expense”—the grand opening of humanity’s first corporate space hotel had just concluded with what could charitably be called mixed results.

It had started, as these things often do, with a ribbon-cutting ceremony where the ribbon had to be tethered to prevent it floating away, and a champagne toast where the bubbles behaved in ways that violated several health and safety protocols.

Brad from Sales stood before the assembled staff, practically vibrating with enthusiasm.

“Ladies and gentlemen,” he announced, gesturing at a PowerPoint slide showing a single confirmed booking, “we’ve achieved what others said was impossible. Our first guest arrives next month!”

There was polite applause. Someone in the back asked if there’d be cake.

“This proves the market is ready,” Brad continued. “Space tourism isn’t the future—it’s now. We’re not just selling hotel rooms, we’re selling transformation. Perspective. The overview effect!”

Julia, the intern assigned to actual customer research rather than Brad’s aspirational market projections, raised her hand tentatively.

“The guest specifically requested we not mention the overview effect in the marketing materials. He said he’s mainly coming for the novelty and the Instagram opportunities.”

Brad waved this away. “Semantics. The point is, we have a customer. First booking leads to second booking leads to exponential growth. Basic sales mathematics.”

That’s when Finance arrived.

Margaret from Accounting carried a tablet displaying numbers that had made three separate auditors quietly update their CVs. She didn’t wait for Brad to finish.

“The hotel cost eight hundred forty-three million dollars to construct,” she said, her voice carrying the weary precision of someone who’d been having this conversation for months. “Operational costs run approximately twelve million per quarter. Our single booking covers roughly point-zero-zero-three percent of construction expenses.”

“That’s why it’s called investment, Margaret,” the Square-Haired Boss interjected, his geometric hair maintaining perfect angles despite the concerning trajectory of the conversation. “You have to spend money to make money.”

“Sir, at current booking rates, we’d need to operate this hotel continuously for approximately two hundred years just to approach break-even.”

“Two hundred years is nothing in cosmic terms,” the Boss replied serenely. “The pyramids took longer to show ROI.”

Julia cleared her throat.

“I’ve been researching government grant programmes,” she said, pulling up her own presentation. “There’s a new initiative for Strategic National Prestige Projects in Low Earth Orbit. It’s designed to fund ventures that demonstrate ambitious commitment to space-based economic development regardless of immediate commercial viability.”

The room went very quiet.

“How much?” Margaret asked.

“Potentially enough to cover operational costs for the next five years. Possibly longer if we demonstrate ongoing commitment.”

Brad immediately pivoted. “You see? Government partnership. That was my strategy all along.”

“No it wasn’t,” said Julia.

“It absolutely was. I’ve been saying from the beginning that public-private collaboration would be essential—”

“Brad, you literally called government involvement ‘bureaucratic interference’ in last month’s presentation.”

The Square-Haired Boss stood, his hair achieving angles that suggested executive

decision-making was imminent.

“Julia, prepare the grant applications. Margaret, adjust the five-year forecast to include government funding. Brad, start planning our second orbital hotel. Clearly the market is responding.”

“Sir,” Margaret began, “we have one booking—”

“Exactly. One booking proves concept viability. Two hotels doubles our capacity. Basic orbital hospitality mathematics.”

And so, three weeks later, Quantum Improbability Solutions submitted seventeen thousand pages of grant documentation, received preliminary approval for funding that would keep the orbital hotel operational until approximately twenty-thirty, and began preliminary designs for a second station.

Their single guest eventually arrived, spent two weeks floating through corridors taking selfies, left a review reading “Three stars—view was nice, WiFi terrible, breakfast options limited,” and returned to Earth with stories he’d tell at dinner parties for the rest of his life.

Brad framed the review and hung it in the conference room with a plaque reading “Our First Success Story.”

Finance updated their break-even projections to twenty-two forty-seven.

And the Square-Haired Boss announced plans for a lunar hotel, because if orbital hospitality was profitable—and the government grants strongly suggested it might eventually become so—then clearly the Moon was the next logical market expansion.

Julia quietly began researching grant programmes for Ambitious Lunar Economic Development Initiatives of Questionable Commercial Viability.

She had a feeling she’d need them.

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And that brings us to the fascinating science behind orbital hospitality—or more accurately, the fascinating gap between what we imagined fifty-seven years ago and what we’ve actually managed to build.

In nineteen sixty-eight, Stanley Kubrick released “2001: A Space Odyssey”, and gave us Station V—a massive rotating wheel in orbit, complete with a Hilton hotel

where Dr. Heywood Floyd stops for a layover on his way to the Moon. The station spins to create artificial gravity, features a Howard Johnson's restaurant, videophone booths that actually work, and a Pan Am space shuttle service with flight attendants in pillbox hats serving meals on proper trays.

It's a vision of space travel as routine as air travel. Comfortable. Almost boring in its normality. Which, frankly, was the point.

Kubrick and his technical advisor, NASA engineer Frederick Ordway, didn't just make this up—they based it on serious aerospace engineering proposals from the nineteen-sixties. The rotating wheel design came from Wernher von Braun's concepts. The idea that orbital stations would need artificial gravity for long-term habitation was considered obvious. And the notion that by the year two thousand and one, space travel would be commercialized and accessible? That seemed not just plausible, but conservative.

Obviously, we missed that deadline by several decades.

But here's what Kubrick got remarkably right: the idea that space tourism would eventually happen, that it would require serious infrastructure, and that someone—governments, corporations, or some combination—would eventually fund it. He just overestimated how quickly humans could turn "technically possible" into "economically viable."

The rotating wheel hotel remains firmly in the realm of science fiction—we'll get to why shortly—but the basic concept of orbital hotels? That's actually happening. Sort of.

We now have near-term projects launching within the next few years—private astronaut missions to the International Space Station, and small commercial stations like VAST's Haven One, scheduled for twenty-twenty-seven. These aren't Hilton properties with artificial gravity and room service, but they are functioning orbital destinations where civilians with sufficient funding and medical clearance can stay.

Then there are mid-term projects for the late twenty-twenties and early twenty-thirties—larger commercial stations that are designed to replace the ISS as multi-purpose orbital platforms, with tourism as one revenue stream among many.

And finally, there are the pie-in-the-sky concepts—the rotating hotels, the orbital cruise ships, the permanent settlements housing thousands. These are the projects that still look exactly like Kubrick's vision, which tells you something about how difficult they are to actually build.

When we return from this brief orbital repositioning manoeuvre, we'll explore how we went from astronauts and cosmonauts as the only humans in space to billionaires taking joyrides to the edge of the atmosphere, and discover why the difference between "suborbital hop" and "actual orbital hotel stay" involves roughly fifty-four million, nine hundred thousand additional dollars and several months of training.

We'll examine the companies actually building orbital destinations, the timeline for when you might realistically book a room—assuming you have the financial resources of a small nation—and why rotating space hotels remain stubbornly in the "next twenty-five years" category, where they've been living quite comfortably since nineteen sixty-eight.

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Welcome back, my orbitally aspirational colleagues!

The history of space tourism begins not with hotels or rotating wheels, but with a single American businessman who looked at the International Space Station and asked a question that would have seemed absurd just years earlier: "Can I pay to go there?"

His name was Dennis Tito. The year was two thousand and one—the same year Kubrick had predicted routine orbital travel, which is either remarkable timing or cosmic irony. Tito, a former NASA engineer who'd made his fortune in investment management, paid the Russian space agency approximately twenty million dollars for a week-long stay aboard the ISS.

NASA was furious. They'd spent decades cultivating the image of astronauts as highly trained professionals, and here was someone buying his way to orbit like it was a particularly expensive holiday package. The Russians, facing budget constraints that made their space program look like it was being run on loose change found behind the sofa cushions, were considerably more pragmatic.

Tito launched aboard a Soyuz spacecraft, spent eight days in orbit, and returned to Earth having proven a concept: if you had enough money and passed the medical requirements, space was accessible. Not easy. Not comfortable. But accessible.

Several other wealthy individuals followed—Mark Shuttleworth, Gregory Olsen, Anousheh Ansari—each paying between twenty and forty million dollars for their orbital stays. Then the programme quietly ended in two thousand and nine as the Space Shuttle was retired and ISS crew capacity became constrained. For over a

decade, space tourism essentially didn't exist.

Until the billionaires decided to do it themselves.

Twenty twenty-one marked the revival of space tourism, though what emerged looked rather different from orbital hotel stays. Jeff Bezos and Richard Branson both launched suborbital tourism ventures—Blue Origin's New Shepard and Virgin Galactic's SpaceShipTwo—offering brief trips to the edge of space.

And I do mean brief. These flights last approximately ten to fifteen minutes total, with only three to four minutes of actual weightlessness. You don't orbit Earth. You don't see sixteen sunrises in a day. You go up, experience a few minutes of microgravity whilst admiring the curvature of Earth, and come back down. It's less "space tourism" and more "very expensive fairground ride with excellent views."

The cost? Virgin Galactic charges four hundred fifty thousand dollars per seat. Blue Origin's pricing is less transparent, but estimates suggest similar figures. For context, that's roughly what you'd pay for a quite nice house in many parts of the world, in exchange for four minutes of floating and some genuinely impressive bragging rights.

The passenger lists have included celebrities, entrepreneurs, and people wealthy enough to consider half a million dollars reasonable entertainment expenditure. William Shatner—Captain Kirk himself—flew on Blue Origin at age ninety, which created the surreal situation of the fictional space captain finally reaching actual space, albeit on a trajectory that would have disappointed Starfleet considerably.

Public reception has been mixed. On one hand, genuine technological achievement—private companies building reusable spacecraft and democratizing access to space, at least for the extremely wealthy. On the other hand, the optics of billionaires taking joyrides whilst Earth faces rather pressing problems has led to what we might diplomatically call "spirited public discourse."

But here's the thing about suborbital hops: they're not orbital tourism. They're not hotels. They're proof-of-concept for a market, but they're not what Kubrick envisioned, and they're not where the industry is heading.

Actual orbital tourism—the kind where you stay somewhere, experience prolonged weightlessness, and need more than an afternoon to complete the journey—requires different infrastructure entirely.

Which brings us to what's actually happening right now.

Axiom Space has revived the model Dennis Tito pioneered: paying for access to

the International Space Station. Using SpaceX's Crew Dragon spacecraft, Axiom organizes what they call "private astronaut missions"—multi-week stays aboard the ISS for civilian crew members who've undergone the necessary training.

The first mission, Axiom Mission One, launched in April twenty twenty-two with four private astronauts who spent seventeen days in orbit. The cost? Approximately fifty-five million dollars per seat. That covers the launch, the return, the ISS accommodation, the training, and presumably several strongly worded liability waivers.

This is currently the only operational pathway that functions as orbital tourism. The ISS becomes the hotel. Axiom provides the booking service, the training programme, and the logistics. It's expensive, it's exclusive, but it's real. Humans who are not government employees are living in space for weeks at a time.

Several more Axiom missions are planned through twenty twenty-seven, though the timeline is somewhat dependent on ISS decommissioning schedules and international space politics, neither of which are known for their predictability.

But the ISS is temporary. It's retiring. Which means if orbital tourism is going to continue, someone needs to build actual commercial destinations.

Enter VAST Space and Haven One.

Haven One represents the fastest transition from concept to hardware in the commercial space station race. It's a single-module station—relatively small, relatively simple—designed to host short-duration crewed missions. The target launch date is twenty twenty-seven, which in aerospace terms is practically tomorrow.

What makes Haven One significant isn't its size or its capabilities, but its viability. It's small enough to be fundable, simple enough to be buildable, and realistic enough that industry observers actually believe it might launch on schedule. This is the orbital equivalent of opening a bed-and-breakfast rather than a five-star resort—modest ambitions, achievable goals.

VAST has already secured a launch contract with SpaceX. The station will be launched aboard a Falcon Nine rocket, which tells you something about its scale. This isn't a massive rotating wheel. This is a single pressurized module that can support a small crew for limited durations.

But it's a start. And unlike many space tourism concepts that exist primarily in press releases and investor presentations, Haven One has actual hardware development underway, actual contracts signed, and actual engineers working on

actual problems rather than theoretical ones.

The vision is to use Haven One as a demonstration—prove the concept works, prove there's demand, then scale up to Haven Two and beyond. It's the sort of incremental approach that actually succeeds in aerospace, as opposed to the "announce a city in space and hope someone figures out the details" approach that typically doesn't.

If Haven One launches successfully in twenty twenty-seven, it will become the world's first privately owned, free-flying space station capable of supporting humans. Not the largest. Not the most capable. But the first. And in the history of space exploration, being first tends to matter quite a lot.

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If Haven One represents the minimum viable orbital hotel, the mid-term projects represent something considerably more ambitious: permanent commercial infrastructure designed to replace the ISS as humanity's primary orbital workplace.

These aren't boutique stations for wealthy tourists. They're multi-module platforms intended to serve national space agencies, research institutions, private companies, and yes, the occasional tourist with fifty-five million dollars and a flexible schedule.

Axiom Station is the most direct successor to the ISS model, and it's taking a remarkably clever approach to construction: they're building it whilst the ISS still exists.

The first Axiom module—the Axiom Hub One, or AxH1—is scheduled to launch and dock directly to the ISS. This isn't symbolic. It's practical. By attaching to the existing station, Axiom gets immediate operational experience with their hardware whilst the ISS is still there to provide backup life support, power, and all the unglamorous infrastructure that keeps humans alive in vacuum.

Additional modules will follow—laboratory segments, crew habitats, observation cupolas—gradually assembling what will become an independent station. Then, when the ISS is finally decommissioned around twenty-thirty, Axiom simply detaches and continues operating independently.

It's the aerospace equivalent of building your new house in the garden whilst still living in the old one, then moving in just before the old one is demolished. Sensible, if you have several billion dollars and access to orbital construction capacity.

Axiom has already flown private astronaut missions, proving they understand the operational side of space tourism. They've partnered with Thales Alenia Space—the Italian firm that built half the ISS modules—so they're not exactly improvising the engineering. And they've secured contracts with NASA and other space agencies who want guaranteed orbital access after the ISS retires.

The timeline is ambitious but achievable. First module launch is projected for the late twenty-twenties. Full operational capability, assuming nothing goes catastrophically wrong, could be early twenty-thirties.

For space tourists, Axiom Station represents continuity. The ISS experience continues, just under different management and with considerably more flexible booking policies.

Then there's Orbital Reef, which is less "hotel" and more "shopping centre in space."

This is Blue Origin and Sierra Space's answer to the question: what if we built orbital infrastructure designed from the start as a mixed-use facility? Research labs, manufacturing capabilities, media production studios, and yes, tourist accommodations, all in one platform.

Blue Origin describes it as a "mixed-use business park," which is either refreshingly honest or deeply depressing depending on your romantic attachment to space exploration.

The technical concept is sound. Large modules launched on heavy-lift rockets. Expandable LIFE habitats from Sierra Space that inflate after reaching orbit, providing more interior volume than rigid structures. Robotic servicing capabilities. Multiple docking ports for different spacecraft.

The challenge is execution. Building a station this complex requires coordinating multiple aerospace contractors, each contributing different modules with different systems that all need to work together in an environment where "turning it off and on again" isn't a viable troubleshooting option.

Orbital Reef's stated timeline targets operational capability in the late twenty-twenties, though industry observers who've watched aerospace schedules for any length of time tend to add "or possibly the early twenty-thirties, or whenever the funding and technical challenges align" to any projected launch date.

For space tourism, Orbital Reef represents scale. This isn't a small station with limited capacity. This is infrastructure designed to host dozens of people

simultaneously—researchers, manufacturers, film crews, and tourists all sharing the same orbital business park, presumably with clearly marked territorial boundaries and strongly worded emails about whose food is whose in the communal refrigerator.

Starlab takes yet another approach: international partnership without the complications of government bureaucracy.

It's a collaboration between Voyager Space, Airbus, and Northrop Grumman—American entrepreneurship backed by European aerospace expertise and American manufacturing capability. The design calls for a single large module launched on SpaceX's Starship, which tells you something about both its size and its dependence on Starship actually being operational and reliable by the late twenty-twenties.

That's a significant "if." Starship is currently in development, experiencing the sort of iterative testing process that involves occasional spectacular explosions whilst engineers learn what doesn't work. It will likely succeed eventually—SpaceX has a reasonable track record of making improbable things function—but "eventually" and "by twenty-twenty-nine" aren't synonyms in aerospace development.

If Starship stays on track, Starlab could potentially launch just as the ISS retires, providing immediate replacement capacity. If Starship development slips, Starlab's timeline slips with it, creating exactly the "capability gap" that NASA's Inspector General has been warning about.

For European space agencies, Starlab represents independence. ESA has been a junior partner on the ISS—contributing modules and astronauts but not controlling the overall programme. Starlab offers European orbital access without requiring permission from either NASA or Russia, which given recent geopolitical tensions has certain appeal.

Now, those are the mid-term projects—the ones with actual hardware development, actual contracts, and actual probability of existing by the twenty-thirties.

Then there are the pie-in-the-sky concepts.

The rotating space hotels. The ones that look like Stanley Kubrick's vision. The ones that have been "twenty-five years away" for the past sixty years.

The engineering challenge is straightforward to describe and phenomenally difficult to implement: build a structure large enough that when it rotates, the centrifugal effect creates something approximating Earth-normal gravity.

This requires a wheel or torus hundreds of metres in diameter. It requires massive on-orbit assembly—you're not launching this in one piece. It requires perfectly balanced mass distribution, or the entire structure wobbles itself apart. And it requires enough structural integrity to handle the constant stress of rotation whilst maintaining pressure integrity.

The benefits are equally straightforward: artificial gravity solves most of the health problems associated with long-duration spaceflight. Bone loss, muscle atrophy, cardiovascular deconditioning, fluid shift—all mitigated by simply spinning the hotel fast enough that standing on the outer rim feels like standing on Earth.

Various companies have proposed these concepts. The Gateway Foundation announced the "Von Braun Station" in twenty-nineteen—a rotating wheel designed to accommodate four hundred guests in luxury accommodations. It generated tremendous publicity, some impressive concept art, and precisely zero actual hardware.

This pattern repeats across the industry. Announce ambitious rotating station. Release beautiful renderings. Attract media attention. Discover that building it would require technology that doesn't exist, funding that isn't available, and launch capacity that remains theoretical.

Rotating hotels remain firmly in the "next twenty-five years" category, where they've been living comfortably since von Braun first proposed them in the nineteen-fifties.

Similarly speculative are the orbital cruise ship concepts—mobile platforms visiting multiple destinations, offering extended luxury stays with private suites and concierge services. These proposals typically involve retired billionaires, impressive PowerPoint presentations, and business models that require passenger loads that don't exist at price points nobody can afford.

And then, at the far end of speculation, are the orbital cities. Permanent settlements housing thousands. Self-sustaining ecosystems. O'Neill cylinders and Stanford tori and all the grand megastructures that space colonisation enthusiasts have been designing since the nineteen-seventies.

These aren't happening in our lifetimes. They require revolutionary advances in launch costs, space-based manufacturing, closed-loop life support, and probably several technologies we haven't invented yet. They're visions, not plans.

But here's the thing about visions: sometimes they eventually become plans. Kubrick's rotating wheel hotel looked absurd in nineteen sixty-eight. Haven One

looks achievable in twenty twenty-six. Perhaps in twenty-seventy-six, someone will look back at Gateway Foundation's renderings and say, "Remember when we thought that was impossible?"

Or perhaps they'll say, "Remember when we thought anyone would pay to live in a rotating hotel when Mars colonies offer so much more space?"

The future, as always, remains to be determined. Though the invoices are coming due considerably sooner.

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Well, my orbitally ambitious colleagues, we've reached the end of another quantum journey through humanity's most expensive hospitality venture.

Today we've learned that space hotels are here—sort of. We've got private astronaut missions to the ISS for a mere fifty-five million dollars, small commercial stations like Haven One launching in twenty-twenty-seven, and mid-term projects that might replace the ISS sometime in the early twenty-thirties, assuming nothing goes catastrophically wrong.

We've discovered that the gap between Stanley Kubrick's vision and our current reality isn't a failure of imagination—it's a testament to just how difficult it is to turn "technically possible" into "economically viable" when your hotel requires travelling at seventeen thousand miles per hour just to stay stationary.

From Dennis Tito's pioneering stay in two thousand and one to billionaires taking four-minute suborbital hops, we've traced space tourism from "impossible" to "technically achievable if you're phenomenally wealthy." And we've learned that rotating space hotels remain stubbornly twenty-five years in the future, where they've been living quite comfortably since nineteen sixty-eight.

Though I suspect somewhere in the quantum foam of reality, there's a universe where orbital hotels broke even in their first fiscal year, where rotating wheels provide affordable gravity, and where corporations like Quantum Improbability Solutions don't require government grants to keep the lights on.

We don't live in that universe. We live in this one, where Julia's grant applications saved the company, where Brad framed a three-star review as proof of concept, and where the Square-Haired Boss is already planning lunar expansion despite having precisely one orbital customer.

But here's the remarkable thing: it's actually happening. Humans who aren't astronauts are living in space. Commercial stations are under construction. The

future that seemed impossible is becoming merely improbable.

Want to explore more cosmic hospitality ventures? Visit us at multiverseemployeehandbook.com where you'll find fascinating science news and our latest blog series: "The First Hilton Hotel In Space."

And if you've enjoyed today's journey through humanity's most ambitious real estate development, share it with a fellow gravity-bound observer. Spread our signal like debris from a controlled deorbit—precisely targeted and landing exactly where predicted.

This is your quantum-coherent correspondent, reminding you that in the multiverse of space tourism, we're all just potential customers waiting for the price to drop from "entire fortune" to merely "catastrophically expensive."

And somewhere in low Earth orbit, QIS's single hotel guest is still floating through corridors, taking photographs, and wondering if the three-star review was too generous given the WiFi situation.

The Square-Haired Boss read it as a ringing endorsement and immediately approved the lunar project.

Finance updated their projections to include "optimistic scenario: lunar hotel attracts two guests by twenty-fifty."

And Julia quietly began researching whether Mars has any grant programmes, because she has a feeling she'll need them eventually.

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