PROJECT DISTANT SKY

1. EXECUTIVE SUMMARY

We are running out of time. Climate instability, energy scarcity, societal breakdown and water stress are converging. Everyone knows the problem. Everyone knows the palliative solution.

We have to create spaces that avoid raising global temperature while sustaining themselves through their own infrastructure. These should be the cities of the future.

All the basic tech already exists, in Dubai there are already neighborhoods like this. But we will have to upgrade the world for it to work.

And that's not enough. We need a non-palliative solution; we need to recapture carbon and methane. And here I propose how to do it, with what I call it the Tower of Salvation. Yes, it is dramatic, as dramatic as global warming.

Imagine a tall, lean tower with some mechanism to pull in air. Imagine its mechanical lungs, taking away all that's harmful and exhaling clean breath. Imagine all that is toxic being repurposed, the carbon, the methane, processed and returned to aid in the city's energy production and manufacturing, in an endless cycle. **Without carbon and, especially, methane, the global temperature will begin to drop**.

Imagine salvation through harmony and through efficiency. Or, what's the same, imagine that we clean after ourselves.

If we can build all new cities this way, and add one, or several, of these towers to existing cities all over the world, as we reshape all existing buildings and neighborhoods with new technologies in order to lower emissions and avoid raising temperature, we will begin to stand a chance against climate change and the energy crisis.

Now, there is good and bad news. The good news: some of the technologies needed to make it happen already exist and just need to be made more efficient, as I have said.

The bad news: some others don't exist yet.

The better news: the technologies we need are possible and viable. We just have to download them from the world of ideas into our practical world. And while we're not insanely far in terms of knowledge, we are very far in terms of funding. Let's be clear: it is a matter of engineering, not physics.

But more importantly, time is the thing we lack. The days to stop global warming are over. The catastrophes are coming.

And if millions are to survive, if the world as we know it is to endure, then stopping the damage won't cut it. We need to reverse it.

It is already too late. We can't buy time. So we will have to make time.

2. PHILOSOPHY & FRAMEWORK

Ideologies are done. They were designed for industrial nations and that's not the world we live in anymore. We need new operating systems to survive.

But in every ideology, there's always something that works. I've taken those useful fragments and condensed them into a single, coherent worldview. I call it Human Integrationism.

I've written a few articles about it, but for the purpose of this project, only one element is essential: its approach to science and development.

Jules Verne didn't have a crystal ball. He had imagination and a deep understanding of the scientific advancements of his time. With that, he extrapolated theoretical technologies that went on to inspire scientists, even into the 21st century.

Human Integrationism proposes a method: group writers and artists with engineers and scientists. Then let them work.

We sit down an author and let them tell a short story about whatever they want, but incorporating ONE of the technologies we lack as a plot point. An artist then starts designing how it could look. An engineer starts envisioning how would it actually work, all supervised by a couple of scientists to tell them 'that's not possible' when they deviate from what's actually doable.

That's the core. Imagination and reason united. Narrative as the catalyst of invention. Art and science intertwined. Not only this one time, for need, but as a general rule for the future.

At different points during this reading, you will say “Okay, yes, we need A to solve B, but how?”. The issues we will face are a matter of engineering, not physics, as I have said. And this is my answer. I can't give you an actual, working solution to everything. Maybe nobody can, at least not in time.

But I can give you a method to accelerate the R+D process. And yes, all the negative results will cost money. But it will be cheap. The cost will be mostly salaries, prototypes will only be built once the team agrees they have a viable concept.

I'll give you a more detailed example in point 8.

3. THE PLAN: A FOUR FRONT WAR

Following the great Latin American literary tradition, we're at war with reality. Let's add our own brand of magic to this sad realism.

Southern front. The people, the smallest responsible party for global warming. We already have a solution for this that can be seen in places like the Sharjah Sustainable City in Dubai, with urban farms inside domes, renewable energy, net zero carbon buildings.

But we need more: water filter systems, compresses to generate heat from human waste, and more importantly, heat dissipating systems for buildings and roads. Think, now, about a city where all houses are like this, and therefore all the neighborhoods and so all districts and, in the end, the whole city uses a common grid to generate power.

Carbon emissions fall significantly. And so the rise in temperature due to the city itself.

Knowing this, we create an open source, scalable upgrade blueprint. A plan to make existing cities colder, with fewer emissions and as close as possible to fully self-susteinable.

All cities will need it to apply the plan or become an unlivable hellhole. Their call.

Eastern front. The countryside is the second largest responsible party for global warming. Cattle ranches, rice plantations, synthetic fertilizers and concentration of manure free insane amounts of methane and nitrous oxide to the atmosphere, and it is worth noting that the latter is three hundred times more pernicious than carbon.

The problem identified, we need a solution. Or three. For methane, small, portable capture units integrated directly into cattle ranches and manure lagoons, converting waste gas into usable biofuel on-site. For nitrous oxide, smart soil sensors and precision fertilization drones that dramatically reduce the need for synthetic fertilizers. For both, a new generation of soil microbes designed to restore health to the land and capture pollutants naturally. The latter is a solution from here to a hundred years, of course.

We transform the countryside from a source of pollution into a distributed network of carbon sinks and energy producers. This is where the first deployment of our new technologies will yield its most dramatic results.

Western front. The single largest responsible party for global warming is, of course, the industries. All of them or at least most of them. As with the countryside, factories will need their own solutions. Nevertheless, the issue with factories is that, rightfully, they have been punished with taxes and sanctions that, in the end, do nothing for the environment.

We stop the punishment by giving them profit as the reason to apply our solution: on-site carbon recapture units. The carbon they emit? It gets sucked into this unit, purified and the carbon repurposed into graphene, or captured into some sort of plaque that can be sold to the central processing plant. At the same time, the unit may generate a bit of energy (more on this later).

This way we're sure everyone will apply our solution. Otherwise, they'll be refusing to make more money. A capitalist brain is simple. As simple as a socialist one. All of them pollute the same way, you know.

Northern front: Reforestation. This is where we should start for two simple reasons. First, reforestation will do a lot of the work on its own, giving us precious time. Two, the technologies to do it at a massive scale already exist, even if they're underfunded.

There are already drones capable of deploying the seeds and devices that can be attached to the seeds so they self-plant. We just need to be sure to either use genetically modified seeds so the first year the tree grows faster, giving immediate benefits, or to use species that naturally grow faster than average.

The final missile. The Salvation Tower, the single most ambitious yet necessary piece of infrastructure. A building that incorporates and scales up all the already mentioned technologies for urban areas. The system to recapture carbon, the system to recapture methane, but bigger, to use the city itself as a focal point. Enter pollutants, get out clean air. One tower, ten, a hundred, until all cities have one.

Due to being able to repurpose the pollutants, the tower is profitable too. The scale opens up the industries of the future, locally generated, equally desirable for everyone, able to supply the same material everywhere in the world.

A true, real, everybody wins, even if it is asymmetric. The country's economy grows, the average citizen has a future for their children. And the investors get filthy rich saving the world instead of destroying it.

4. TECHNOLOGY

The following is a technical overview of the core technologies required. I've broken them down into their current status, existing precedents, and the primary challenges our R&D teams will need to solve.

What's ready: Transformation of kinetic energy into electricity in sidewalks, rotary doors and gyms. Solar panels (but only around 25% effective). Microgrid for smaller zones. Wind energies for rooftops. Biodigesters. Rainwater capturing systems. Roof heat reflection systems.

What we need to improve: Solid-state batteries, atmospheric CO_2 capture, water-cooled streets, urban thermal storage, more efficient solar panels.

What we need to create: everything else.

While technologies to capture carbon (and methane, to a lesser extent) do exist already, they are expensive and work on a small scale. We have to think bigger. And do bigger. Planet-wide bigger. Or we're done for.

Part by part, how do I envision it:

—Atmospheric intake system

Status: not yet scalable

Giant intakes distributed along the tower's vertical surface pull in vast amounts of surrounding air. Internal fans, powered by solar, wind and kinetic energy from the city, push air through an internal processing system.

Existing precedent: Climeworks' direct air capture plants in Iceland.

Problem: They scale linearly, not exponentially. We need exponential.

—Multi-stage filtration core

Status: in theoretical design phase

Inside the tower, a multi-stage filtration core separates carbon dioxide, methane, and other pollutants from the air. Each compound is redirected to its corresponding processing unit.

Existing techs:
MOF-based carbon capture (metal-organic frameworks)
Cryogenic separation methods
Zeolite methane traps

Missing: A stable, low-energy method for multi-pollutant real-time filtration at massive scale. This is the biggest challenge. Current carbon capture tech, while immediately useful, won't be enough in the future. We need to work NOW in a different way, so we can reuse it instead of just storing it as solid rock.

—Molecular conversion & reuse

Status: lab-level only

CO_2 is fed into algae bioreactors or synthetic photosynthesis chambers to generate biomass or fuel. **But the Holy Grail is to find a way to make it into graphene**.

Methane is processed via catalytic oxidation into usable heat or electricity.

Trace gases (like NO_x, SO_2, N_2O) are neutralized through chemical absorption or thermal dissociation.

Emerging research:
Electromicrobial carbon-to-fuel conversion
Solid carbon formation (graphene, graphite)
Algae-based carbon farming

Missing: Systems that integrate all three in a single regenerative loop.

—Renewable energy integration

Status: concept-level only

The entire system is powered by the city itself: solar panels, wind turbines, piezoelectric flooring, and waste heat from vehicles and appliances. Excess energy stored in solid-state batteries maintains 24/7 operation.

Missing: Coordinated energy grid tied directly to the tower's intake/processing cycles.

—Outposts that close the loop

Status: speculative

The byproducts (heat, energy, clean air, fuel, raw carbon) are returned to the city's infrastructure:

Heat goes to urban heating circuits or biodigesters. Energy powers homes and transport. Recovered materials feed into construction and manufacturing. Clean air feeds back into public parks and residential zones.

Missing: Unified architecture to tie inputs and outputs in real time.

This is how the tower becomes a lung.

In conclusion, we need a vertically integrated, city-powered, pollutant-harvesting bio-industrial tower that makes the air better, feeds the grid, and helps build the next tower.

Each one would lower the temperature. Each one would extend our timeline. City by city, new and old, and tower by tower.

—Next-gen reforestation

The world has lost over 1.3 million square kilometers of forest since 1990. That's like erasing South Africa. And planting back trees like it's 1950 won't cut it. We have to do what nature can't: cheat time.

What we need to create: a forest big enough to matter. And fast enough to help.

Status: in early-stage research

We need trees that grow faster, capture more carbon, and resist droughts, pests and fire. Bioengineered root systems, altered chloroplast efficiency, and CRISPR-ed resilience.

Missing: Global regulatory alignment and seed production at scale.

—Drone-based autoplanting swarms

Status: semi-proven, underfunded

AI-guided drones survey land, model terrain, and autoplant thousands of seeds per hour with biodegradable seedpods pre-packed with nutrients and fungi. Each drone is a soldier in the forest war.

Examples:
Flash Forest (Canada)
BioCarbon Engineering (UK)

Missing: Military-scale logistics, better seed capsules.

—Soil reactivation microbes

Status: lab-ready, not field-deployed

The land isn't just deforested, it's almost dead. So we reawaken it. Engineered microbial cocktails restore nutrients, balance pH, and decompose pollutants. Think probiotics for the Earth.

Missing: Full compatibility between trees, microbes and soil diversity per region.

—Satellite & AI monitoring

Status: available, underutilized

Every tree. Every cluster. Every anomaly. Monitored in real time by orbital satellites and machine learning. Fires? Drought? AI flags it. Drones fix it. No delay.

Missing: Integration of satellite networks into a global forest dashboard.

—Community & refugee green jobs

Status: concept-only

Where machines can't go, people do. Local crews (especially refugees, displaced people, and rural communities) become forest stewards. Paid, trained, and connected to a regenerative economy. Trees as infrastructure. Forest as livelihood.

Missing: Funding, long-term employment guarantees, and land rights protections.

Reforestation needs to be faster than climate change. That means smarter drones, smarter coordination and enough audacity to replant an entire continent if needed.

We don't have decades. We have drones and desperation. That may not be enough, but it is a start.

The good news? Reforestation is relatively fast. The tools are ready. The first benefits, such as localized cooling and initial carbon capture, will be measurable within five years. Every forest we plant is a down payment on our survival. It buys us time. Time that the trees themselves provide by physically lowering the temperature, counter-balancing our ongoing emissions while we scale up the towers.

5. IMPACT

What would one of the towers actually achieve?

Let's assume a fully functional prototype: one tower, built in an urban environment. For reference, let's say it will be ten times the scale and processing power of the Climeworks Orca plant in Iceland.

Here's what it would deliver:

—Carbon removed
~40,000 tons of CO_2 per year, using hybrid systems (MOFs, cryogenic filters, algae-based capture, electrochemical conversion).
Enough to offset the emissions of ~10,000 combustion cars annually.

—Methane neutralized
~250 tons of CH_4 per year, catalytically converted to heat or energy.
Given methane's warming potential (84x CO_2 over 20 years), this impact is disproportionate, potentially equivalent to eliminating another 20,000+ tons of CO_2-equivalent greenhouse gases.

—Clean energy returned
~2 to 4 GWh/year of net energy produced, depending on conditions and tech maturity.
Sourced from:

Integrated solar and wind

Urban kinetic capture

Methane conversion

Waste heat harvesting

Surplus energy powers neighborhoods, transit systems, or even other towers.

And yes, this isn't enough to power a whole city. Traditional power plants would still be needed.

—Air purification volume
~2 billion m³ of air processed per year, removing trace pollutants (NO_x, SO_2, PM2.5) from urban skies.
Cities breathe easier. Respiratory diseases drop. Quality of life improves.

—Urban cooling effect
Between 1–3°C local drop due to heat-reflective design, evaporative features, shaded surface area, and atmospheric flow.
Reduced need for AC. Reduced peak energy loads. Fewer heatwave deaths.

—Materials Recovered & Repurposed
The tower is not just a filter; it's the foundation of a local, circular carbon economy. The captured CO_2 and methane will be treated as raw materials for dedicated, secondary processing modules:
Solid Carbon: A portion of the captured CO_2 could be routed to high-energy reactors and converted into valuable solid carbon forms, such as industrial-grade graphite and research-grade graphene. On day one, we need teams dedicated to achieve this.

Bio-Fuels & Biomass: The remaining CO_2 will feed on-site algae bioreactors, generating biomass and carbon-neutral synthetic fuels for municipal vehicles.

The technology for this level of conversion is not yet mature. This is not a flaw in the plan; it is the core purpose of the initial R&D. Part of our mission is to close that gap.

—Jobs created
Each tower enables ~150 to 300 direct jobs:

Scientific staff

Maintenance crews

Algae bioreactor teams

Drone operators

Data engineers

And thousands more indirectly, especially through construction, local energy, recycling, and research partnerships.

One tower = One lifeline
If built right, one tower could delay tipping points by a measurable margin.
Ten towers? A network. One hundred? A new industry. A thousand? A planetary shift.

Consider the numbers expressed here more as a set of goals than anything else. For obvious reasons, I can only estimate at this point.

How much would this cost? We're talking about building cities and new technologies. The plan is beyond ambitious: not even a pharaoh dreamt of something on this scale. So, most likely, this would cost billions. Plural. With a B. And I have no idea how many. The good news is that the whole point of this initiative is to initiate. Others will follow. Governments and corporations will have to. In the end, every person will have to collaborate, one way or another, directly or indirectly, to the global effort to save the only planet we have. In the following chapter, I provide a detailed breakdown of the projected costs for each phase. Again, as a set of goals.

This will happen. This has to happen. Otherwise, it will be suicide for half of the people on the Earth. And there is no guarantee that you and I will be part of the surviving half.

6. SCALING STRATEGY

Phase 0: Permanent R+D

Form the first teams for research and development.
Goal: Apply the method I describe in chapter 8 to accelerate the engineering solutions needed to develop the technologies we need: a patent portfolio to define the industrial paradigm of the future. This is a permanent innovation asset that could be applied to different, unrelated endeavors down the road.
Estimated cost: Basic and ongoing.
Includes: Finding the right people, paying their salaries and the infrastructure (building, chairs, blackboards, etc) to celebrate the meetings, if not done remotely, which would make it cheaper.

Phase 1: Large-scale Reforestation (e.g., Amazon)

Implementation of a reforestation plan using drones, potentially genetically modified trees and/or the faster growing native trees.
Goal: Compensate emissions at scale, restore vital ecosystems and win time to develop and implement everything else that's needed.
Estimated Cost: USD 3–4 billion
Includes: Drone fleets, seed/genetic programs, local coordination hubs, ecological monitoring.

Phase 2: Initial technology deployment

We deploy the carbon and methane conversion units developed since the start of Phase 0, directly into factories and cattle ranches.
Goal: To show undeniable proof-of-concept of two things. One, the system works as intended. Two, it is profitable for the partner. This will showcase what we can actually do and make the world see for itself the benefits we provide.
Estimated cost: USD 3–5 billions.
Includes: The engineering and construction of the first full-scale, operational prototypes and units, their integration into partner facilities, and the establishment of on-site monitoring and data analysis teams. This is the phase where the theoretical value of the patents from Phase 0 is converted into hard profit for the investor.

Phase 3: Urban blueprint

Design the urban changes needed to upgrade existing cities.
Goal: Hire an army of engineers and architects to develop the open-source blueprints to use current technology to make cities as close as self-sufficient as possible. With space to integrate our yet-to-develop tools.
Estimated cost: 10-20 million dollars.
Includes: Development of conceptual energy grid, biodomes for farming, green architecture, cooling systems, waste compressors for central heat, etc.

Phase 4: The tower

With the technologies ready, we scale them up. We integrate all of them in our Tower of Salvation. We build the damn thing. You (yes, you) press the green button to kickstart it.
Goal: To do the job. To recapture carbon and methane and repurpose it, to generate some energy, to clean the air, to cool the world.
Estimated Cost: USD 5–10 billion per tower, at least initially. With significant cost reductions expected as production scales and technologies mature.
Includes: Design, construction, tech modules, integration with energy/water systems, personnel training.

Miracles needed: none. Most of that money is for researching and developing what we're missing and large scale operations. Will it be enough for everything? No, but it will be enough to make real progress, there will be more time later to solve everything else.

All cost estimations are preliminary and subject to variation depending on geography, partnerships, political conditions, and access to materials or labor. Consider it a declaration of intent and nothing else.

Chances are, the real budget is somewhere between 100 and 300 billion USD, total. If not more.

And who’s going to pay for all of this? Me. You. Everyone else.

Maybe not pay in the literal sense, not through donations, but let’s be honest: no individual can fund this alone. Unless, of course, your name is Mohammed bin Salman Al Saud.

All hands on deck. Everyone will have to contribute, in one way or another, to make this happen. In its final, global form, we should all be working on this: upgrading cities, building new ones, bringing towers where they’re needed, reforesting the world. Sacrificing a cup of coffee in order to donate that money to the cause.

No matter who you are, you live in this speck of dust around a so-and-so star in a very average galaxy. And this is the only world you have.

Help save it or move aside.

7. FEASIBILITY

This approach is not science fiction. It is a convergence of emerging, real-world technologies, strategically integrated to solve multiple planetary crises at once. And, yes, we envision new, necessary technologies. Below is a breakdown of each component, its scientific basis, and how we plan to scale it over time.

—Carbon Capture – Direct Air Capture (DAC)

We deploy modular DAC towers inspired by real-world projects like Climeworks (CH) and Carbon Engineering (CA), optimized through smart airflow control and sorbent efficiency.

Target capacity: 40,000 tons of CO_2/year per unit.

Technology used: Solid sorbents, heat-assisted regeneration, AI-controlled flow and temperature regulation.

Energy source: 100% renewable (solar/wind) with battery support.

Feasibility: Fully proven at smaller scales. Our role is to scale, automate and optimize cost.

(SOME) SOURCES:
https://energy.mit.edu/news/technologies-to-remove-carbon-dioxide-from-the-air-a-reality-check/
https://www.sciencedirect.com/science/article/pii/S0959652619307772

—Methane Capture – Advanced Materials R&D
Methane (CH_4) is a far more potent greenhouse gas than CO_2. While airborne CH_4 capture is less developed, we would partner with researchers exploring:

Metal-Organic Frameworks (MOFs) tailored for CH_4 adsorption.

Catalytic oxidation, potentially converting methane into CO_2 and water.

Plasma-enhanced systems for selective methane breakdown.

Feasibility: Early-stage but scientifically grounded. The towers could allocate a subsystem for methane processing R&D. Solving this is a primary goal of the initial funding.

(SOME) SOURCES:
https://news.mit.edu/2024/new-catalyst-can-turn-methane-into-something-useful-1204
https://link.springer.com/article/10.1007/s11090-023-10417-9
https://www.nature.com/articles/ncomms2697

—Carbon-to-Materials Conversion (C2M)
We aim to transform captured carbon into high-value materials using catalytic or plasma-assisted processes:

Graphene and carbon nanotubes from solid carbon.

Biochar and composite materials for industry use.

MOF synthesis for reuse in gas capture.

Feasibility: Already demonstrated in academic labs and startup settings. The challenge is throughput and cost-efficiency, both tackled through vertical integration and clean energy.

(SOME) SOURCES:

https://www.sciencedirect.com/science/article/abs/pii/S138589472102564X
https://www.sciencedirect.com/science/article/pii/S0960852424016869
https://www.mdpi.com/2079-4991/9/3/439

—Self-Powered Infrastructure
Each tower is fully self-powered, relying on hybrid systems:

Solar PV and micro wind turbines, optimized by AI for dynamic environmental conditions.

Next-gen solid-state batteries for storage.

Thermal regulation modules to maintain operational ranges.

Feasibility: All components exist; integration and smart control are key. Early prototypes will focus on energy-positive operation.

(SOME) SOURCES

https://news.mit.edu/2024/self-powered-sensor-harvests-magnetic-energy-0118
https://www.sciencedirect.com/science/article/abs/pii/S1385894724088855
https://www.sciencedirect.com/science/article/abs/pii/S037877882401065X
https://www.nrel.gov/transportation/energy-storage-thermal-mgmt

—Reforestation via Drone Swarms + Genetically Resilient Seeds

We use autonomous aerial drones to deploy climate-resilient trees on degraded land.

Seed pods contain modified species with:

Fast growth rates.

High carbon sequestration.

Drought and heat resistance.

Flight AI ensures dense, biodiverse coverage per hectare.

Feasibility: Drone-based reforestation is proven. Genetic seed enhancements are under development with scientific partners and subject to local regulation.

(SOME) SOURCES:

https://news.mongabay.com/2023/07/new-tree-tech-cutting-edge-drones-give-reforestation-a-helping-hand/
https://www.nationalforests.org/blog/piloting-drones-as-a-reforestation-tool
https://www.airseedtech.com/about

—Passive Cooling
Each tower includes systems for clean water generation and urban thermal relief:

Atmospheric Water Generators (AWGs) using condensation + MOF membranes.

Passive cooling design (albedo control, heat sinks, plant-integrated airflow).

Water recycling systems for localized human and agricultural use.

Feasibility: All components exist in commercial or pilot form. Integration into tower design enhances both survival and sustainability metrics.

(SOME) SOURCES

https://pmc.ncbi.nlm.nih.gov/articles/PMC6813556/?utm_source=chatgpt.com
https://www.science.org/doi/10.1126/science.aai7899?utm_source=chatgpt.com
https://www.frontiersin.org/journals/environmental-science/articles/10.3389/fenvs.2022.836289/full?utm_source=chatgpt.com

As we move forward with this project, and as the global scientific community continues its own momentum, new technologies and methodologies will inevitably emerge. Some of them will accelerate our work, reduce costs, or open entirely new pathways. This is not a distant or speculative future; it is already unfolding.

This is less of an academic paper and more of a desperate call to action for all of us. All of this is far from perfect, but I'm not aiming for perfection, I'm aiming for a start.

8. THE VERNIAN METHOD: TOWARDS A NEW RENAISSANCE

And here we are. The *how we accelerate the development of new technologies* part, at last.

From an anthropological point of view, stories have many applications. Here, it is essential for a shared understanding.

Step one: Knowing the goal, the author tells a story or part of a story. But not just any story. The most basic, cliche and straightforward story

Author: “In a not so distant and post-apocalyptic future, a group of people stumble upon a jewel from the past: THE PLANT. All others were destroyed, but this is functional. Old wives stories say this plant was used to clean the air, generate energy and produce metal.”

He could say it happened during a dark and stormy night and that would only improve his first intervention.

The scientist will check the feasibility of every step

Scientist: “So, the plant includes three different systems working along in three different things. The building is a multi-function one. Otherwise, most likely, you’re proposing something that breaks the laws of physics.

The engineer will give the mechanical understanding.

Engineer: “Not necessarily. If it is a device with air-intake systems, then there is some form of gas involved. The pressure from the gas itself, not the controlled explosions of an engine, could push some sort of system similar to the piezo-electric technology for sidewalks, generating the power through an initially analogic device”

The artist has been listening to all of them. They have a visual now. They sketch it.

Terry Pratchett has a fictional element: “Narrativium”, the stuff of stories. In his Discworld saga, it makes stories happen. By throwing all these people together in a room, with a professional storyteller triggering them, we make sure they insert themselves into a great narrative of discovery. **Their mental state here matters**.

Step two: The author, now being sure of having everyone in the context of a story, and asking all the right questions, positions himself beyond the fourth wall, sure that everyone understood their role by practicing it.

Author: “One of this group of people found a logbook in the building, while they were looking for spaces close to the door, easy to defend and able to become a temporal base for them. The room they chose looked like an abandoned inner greenhouse/hothouse. The logbook was mostly about the person’s private life, but some of the fragments were about the work. It detailed the day to day job. Including the fact that there were a bunch of guys in charge of the inner garden. They didn’t just take care of the plants, they also moved it from the garden and into the system”.

Scientist: “So, they’re using enzymes. Like any tree would do during photosynthesis. I guess we can try to design genetically modified enzymes to make it work faster or in bigger volume or both. And maybe even to generate more gases, therefore having more pressure for the kinetic systems to generate energy, I guess.”

Engineer: “So, it needs a ventilation system with some sort of filter. Something that frees clean air outside. Or better: something that makes so the plants ONLY give clean air. This way, you don’t have to filter it, it can just go into the city. More importantly, the ventilation system also has to be an integral part of it all, it has to be able to pull in the outside air, to give the enzymes a constant source of carbon to work with”.

The artist now has something else to add to their design. And maybe a theme, still too vague to see.

Step 3: The writer now closes the gap to something concrete.

Author: “One of them took his time to take a walk through the place. It was a compound with some basic utility buildings around a lean, tall tower. Inside, there were several rooms, including the greenhouse. In the center, through several floors, there were machines connected to the ventilation system that started at the top of the tower, with a central intake system.

One of these machines contained the genetically modified plants aforementioned.”

Scientist: “Shouldn’t be plants, per se. In that form it may work, but it would take too much space that isn’t contributing to the recapture of carbon purpose. It should be some sort of structure, biological or not, that contains only the parts that do intervene in the process”.

Engineer: “I don’t know how the carbon goes out of the air, other than through this machine, but it needs storage. Something underground, maybe. Or maybe it should just go as graphene, in which case it still needs storage.”

The artist finally sees the theme and speaks:

Artist: “It’s a lung of sorts. An inverted lung, instead of taking oxygen to feed the body and expel carbon, it takes carbon and expel clean air. But shouldn’t that be carcinogenic or something?”

And this will lead to the first theoretical breakthrough.

Step 4: The writer, or someone else, will recognize the point.

Author: “Or something. But the point is right: tumors grow. The character who was strolling took a look at the functional but unplugged machine. He saw something growing from the plants, like a tumor. Black. Metal. And it wasn’t a Norwegian band.”

Scientist: “So, the enzymes expel oxygen and process the carbon it concentrates and the end result is actually graphene? Bold. But theoretically possible. Cancer tumors are made of human cells, not external carbon, but the principle could be the same, some sort of replication system that keeps adding the carbon particles until it forms the metal”

Engineer: “Graphene is not a metal, by the way. Graphite would be a bunch of piles of graphene stacked together. Like three million piles for a millimeter. And then it needs something else. Something to form the graphene in the first place. Do you think we can engineer the machine with the enzymes so it is just the end result or is it science fiction?”

The artist progresses with the sketch, which, in a loop, will give ideas to everyone else as the process advances.

Step 5: Looking at the artist’s sketch, the writer has an idea.

Author: “The character saw the tumors in the plants and noticed they look more like flowers that could be picked”.

Scientist: “They do not integrate, then, into the system; they emerge. The by-product can be collected and taken into storage. Now, this should be possible, there is nothing in the laws of physics stopping it”.

Engineer: “Maybe it can be done with a nanotubes structure? We use graphene itself to make the structure so once the carbon separates from the air, it takes form through this structure, emerging by pressure of the same carbon being processed, in a continuous process.

Artist: “Cool. I’m drawing it. But that can’t be all”.

Indeed, the artist is right. The first cycle is complete. They have a viable pathway, a core concept.

That’s round one and it is an absolute success. They don’t have a solution, but they do have all the essential questions and a clear goal: reverse engineering.

The process now becomes a relentless loop of iteration. Each cycle, from Step 2 to 5, refines the problem, pushing it from ‘how do we make it work?’ towards ‘how do we make it more efficient?’. The cycle only stops when the theoretical model is solid enough for the lab teams to begin physical prototyping.

This entire process, from a story to a viable pre-prototype concept, is achieved in a timeframe measured in weeks, not years. It compresses decades of linear R&D into a single, high-intensity assault.

I know it will work because it has worked. From Cornelis Drebbel diving a thing that from afar looked like an early submarine in the Thames River in 1620, to Jules Verne envisioning the Nautilus in 1870 to the construction of USS Nautilus in 1958, there is a long list of steps to envision, inspire and create. The Vernian Method compresses all of it into one single collective action.

And we encourage asking a stupid question. This hypothetical graphene bioreactor is an example of the method at maximum output, aimed at a foundational problem. The same five-step cycle can be applied to immediate, operational challenges such as redesigning a faulty component or designing a new cooling system for graphic cards. The method's purpose is twofold: to enable the giant leaps and to accelerate the constant, profitable march forward in any field it is applied to.

9. FUNDING & POSSIBLE RETURNS

There are three possible ways to fund this project and all of them will be needed: Public, private and crowdfunded sources will coexist.

Strategic Private Capital: Seeking a cornerstone investor (a sovereign wealth fund, a dedicated family office, or a technology corporation) to fund the initial, high-risk phases of R&D and prototyping. This partner may gain a first-mover advantage in the defining industry of the 21st century.

Public & Institutional Partnerships: As the core technologies are de-risked and proven, we will engage with governments and international bodies (like the World Bank or regional development banks) to co-invest in the deployment of infrastructure at a national scale.

Global Public Engagement: To ensure this project remains a truly global and human endeavor, we will develop a platform to allow for public participation. This could take the form of a decentralized funding vehicle or a foundation that accepts contributions, allowing individuals worldwide to have a stake in our shared future.

As for returns, you, dear investor, get to live. Your loved ones get to live. But if that's not enough:

Financial returns: First access to the patents everyone will need for the world that's coming. Even if in the end it is open source, the potential earnings of this portfolio alone could be massive.

Owning part of energy markets. Owning part of the means of production for a carbon-based industry.

Social returns: jobs, inclusion, education, prestige. A new space race, but not for discovery, for survival. Far better for a generation than waiting for the next social media trend.

Ecological returns: Forget "carbon credits". That's for accountants. The real return is a physically breathable atmosphere. A stable climate. The end of existential threat as a daily condition. It's the acquisition of the ultimate luxury good: a future.

NOTE: none of these returns will be of any use in the grave, nor do they have the power to bring your loved ones back. Just saying.

10. APPENDIX

A | Risk analysis

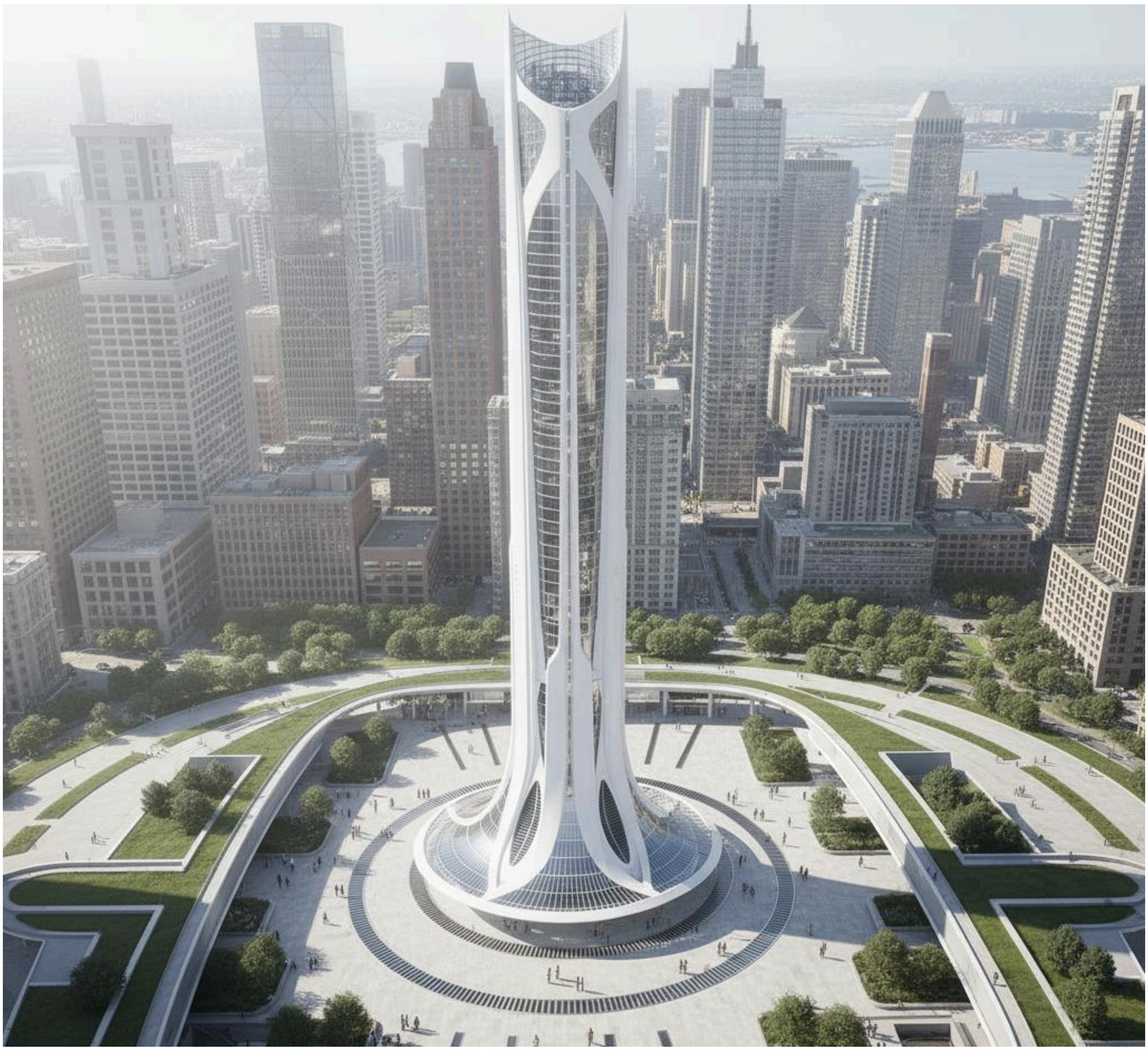
Obstruction by corporations and suicidal governments. Inflation and currencies collapse. War. Faster environmental decay than expected. People not liking my face.

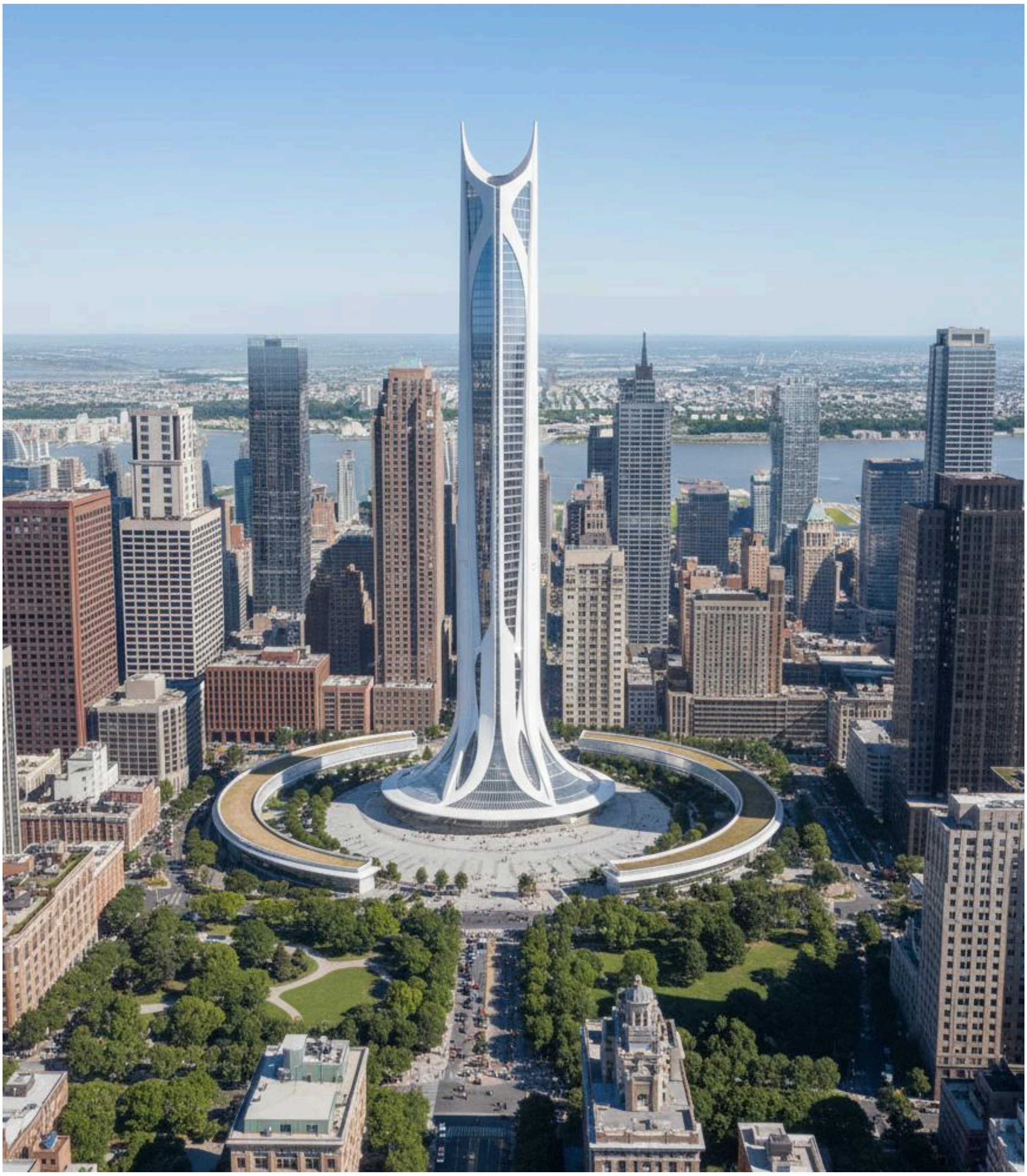
There are risks. And I can give you possible pathways out of all of them (except the last one, of course). But I won't. This isn't a perfect plan, it is just the only plan we have so far. With your help, and everyone else's, we will make it perfect in due time.

B | Visuals

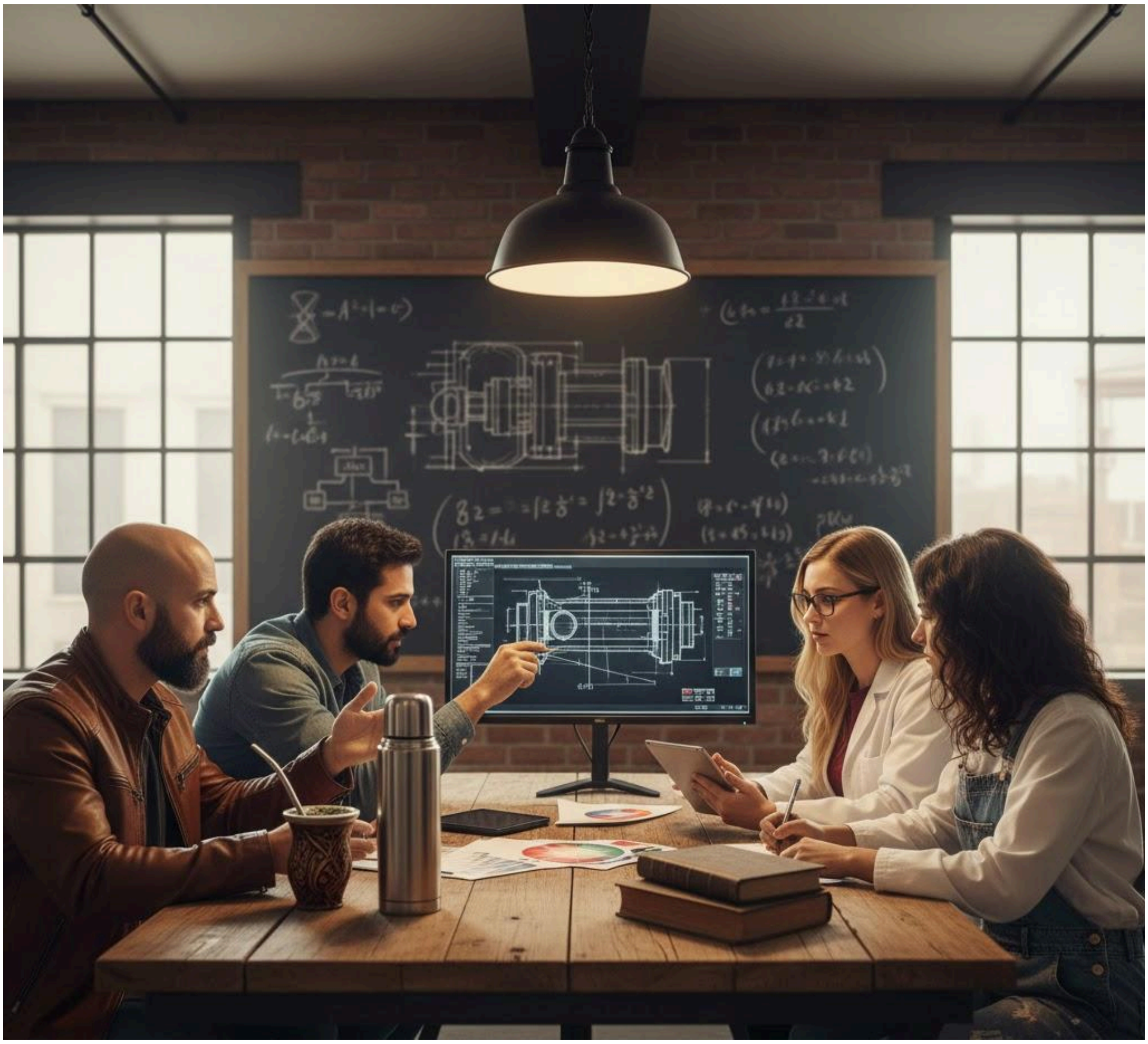
We're visual creatures, so I've put into images what's on my mind. This is just very early concept design and nothing else. And yes, I made it with AI.

TOWER





R+D ACCELERATION PROCESS MEETING



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