

With the largest project I had ever worked on firmly in a hands off stage, I decided to take some time off from working. For a few days I simply relaxed, spending time with Ema and Tony, whose brush with Wakandan technology had left him determined to use his vibranium to its fullest, with an eventual goal to push it even further than the isolated country had.

“The problem with isolation is stagnation.” He had explained as I watched him work on something, looking through a magnifying glass to solder some electronics. “Sure the occasional genius will ride on the vibranium train and drag them a few hundred years into the future, but that can only take you so far.”

“True, but you're only one person too,” I pointed out. “If you really want to challenge Wakanda you're going to need a much bigger group.”

“That's what the tower is going to be for.” He explained, looking up from his project. “Pretty sure we went over this.”

“We did,” I said with a nod, happy to steer the conversation a bit to what I wanted to talk about.

Tony looked back down at his project, continuing to work. The workshop was quiet for a few minutes as he worked and I thought to myself. Eventually I spoke up.

“I was thinking. Instead of your tower being this hub of research and development, why don't we make it how you get to the hub of research and development?”

It took a moment for Tony to catch on to what I was saying, and when he did he put down the tools and looked back up, his full attention now on me as he leaned back in his chair.

“You want to put it on the Moon, and make Stark Tower how you get to it.” He said, crossing his arm. “Why? The building is already more than halfway done.”

“We both know that's not a problem, even if I wasn't here to help,” I pointed out. “As for why, I had an idea, but in order for it to work the lab would need to be as neutral as possible.”

“Why? What's the point of that?”

“Because, I want to be able to help. Imagine what the best minds in the world could accomplish if they were working together with equipment I made. You want the biggest particle accelerator ever? Sure, give me a week and I'll have one that fits in your lab but is still, somehow, the size of Texas. A microscope that lets you look at atoms? Alright, no problem. A fake human body to study cancer treatments? Give me a week and you'll be able to print them out on demand.”

“And you couldn’t do that at the tower?”

“And have the US government breathing down our necks?” I asked, shaking my head. “Having the portal there would be bad enough. No, if we build this on the Moon then there is nothing anyone can do about it.”

“Well, not nothing,” Tony said. “They could fit a pretty big bomb in the storage area of a space shuttle if they wanted.”

“Maybe, but it would take us a day, maybe, to make something that could shoot anything like that down. Besides, in order for tensions to get that high we would have to fuck up pretty badly.”

Tony nodded and looked off to the side. He was clearly thinking, his impressive brain running through who knows how many scenarios.

“Why the sudden change of pace? I know we discussed having the tower connected to your Moon base but I was thinking more along the lines of researching the Moon itself, and so we could help each other occasionally. This is way more involved than I thought you wanted to get.”

“I don’t want to get involved, but I still want to help. This is the middle ground,” I explained, standing up from my seat and pacing. “I know Shield has already decided they aren’t going to distribute my palm healers, they are all broken and inert already meaning that someone either stole them or the World Security Council voted against it. And to be honest I’m kind of glad they did. The healers were too heavy handed, too much too soon. I wanted to help and I didn’t really think of the best way to do that.”

“I don’t know, I thought your only big mistake was bringing them to Shield and not me.” Stark said, watching me pace back and forth.

“Oh they worked just fine. They did exactly what I wanted. But how would the world have really reacted to them? It would have been chaos. Can you imagine what would happen if someone important needed to be healed and the device refused?”

“Yeah... Yeah that would have been bad,” Tony agreed, wincing slightly. “Half the government wouldn’t have been able to use them. But what’s this have to do with a Moon lab?”

“Because of the same principle as the repair puck. I could solve world hunger in a week, cure who knows how many diseases in hours. I could make a cure for the common cold in an hour with a trip to CVS and fifty bucks.”

I kept pacing, slowly stopping by DUM-E, one of Tony's robotic arms, watching it slowly shift and move to scan my face. At least that's what I thought it was doing. I turned back to look at Tony a moment after.

"But the world would spiral out of control if I did any of that. Providing free food for the world would tank the farming industry. Entire countries would fall into bankruptcy. Curing cancer would be great, if cancer treatment wasn't a twenty billion dollar industry, and that's not even taking into account how many people make the stuff needed for that treatment. I mean I still want to cure cancer but... The whole world is on a balancing act and the Conceptual Deck is a pretty big fucking weight."

"Stagnation would be a problem too," Tony pointed out, and I nodded in agreement.

"I still have some ideas to help the world in more subtle ways," I said after a long moment. "A few of them actually. But building a Moon base is one way I can be much more overt without flipping the world's economy upside down. If I made a pill to cure the flu, I would have to manufacture it myself because it would be impossible to make in a lab. That would ruin a huge industry and the people who work in it. But if a scientist develops a harmless and effective treatment for sore throats or blocked sinuses then that could be made in a normal factory, and offset the jobs it ruins. It's slower, yeah, but has much less of a risk to spiral the world into chaos or make it a hundred percent dependent on me to survive."

"...I think you are underestimating the stability of the world slightly, but you're not completely wrong," Tony agreed after a long pause. "Helping the world solve its problems rather than solving them for it sounds much more sustainable... But a lot of people are going to be angry with you. A lot of people are going to ask why you didn't cure their cancer or keep them from starving."

"Yeah... I know." I said, looking down and summoning the deck to my hands, idly twirling a card in my fingers. "But I'm hoping that we can save enough people that they understand what we are trying to do."

Tony sat there for a long couple of minutes, still thinking to himself. I waited semi patiently for him to finish.

"Alright, you sold me. Stark Tower will be the connection point between a Moon base and Earth," He said, finally nodding. "When should we make the announcement?"

"I need to make the base first, then we need to start inviting people." I said, plopping down back into my seat. "I would like it to be up and running before we make the announcement."

"Just how big are you thinking of making this place?" He asked. "How many people do you want to invite?"

“Just a couple hundred. No more than a thousand.” I said with a shrug, Tony rolling his eyes. “No, there will probably only be two hundred people living up there, max. The rest of the staff...”

“Could live in the Tower, yeah, fine, but we are designing it together. No way in hell I’m letting you build it on your own. Seriously, it’s an octagon with a hole in it.”

“Hey, the Octopit looks cool.” I insisted, getting a look in return.

“Yeah, I’m naming it too.”

“That one’s on Ema.”

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Tony and I spent the next week brainstorming ideas for the design for the research and development base. We went through several designs overall before settling for a singular concept, fine tuning that one until we were sure it was perfect.

The circular structure would start deep underground, with four floors of massive rooms for large scale experiments, equipment and labs. Three of these floors were two dozen feet tall, with the bottom floor fifty feet tall. Above those, and still underground, were five more floors for labs and workshops. We divided each of those floors into four slices, all around a central cylindrical core that ran up and down the entire structure. This core contained a few things, including several massive freight elevators. Two slices per floor would be for a particular department, things like biology, physics, engineering. The other two slices were for the expansion of either the other two quarters or for new divisions.

Above the labs, and the first part of the structure above the ground, would be four more floors, the first two of which would be for the apartments. Each apartment was a thousand square feet, and would hopefully be relatively modular so its tenants could decide how it would look internally. The third floor would be left empty for now, sealed off and ready to be used in case we needed more room for people or for anything else.

The fourth and final floor of this massive structure was the “Public” area. Basically it was a lot of space for us to configure for meetings, showrooms, social things like that. It also was where we were going to eventually put the portal, in a large open room that was a cross between a great hall and an airport terminal.

The final addition to the structure was a massive see-through squashed dome resting on top of the public floor. Under that shallow, but still substantially tall dome would be a massive green filled park with paths to walk, a small pond to swim in and even a beach to lounge around

at, all with the spectacular view of space above. The footprint for each floor was just under five acres, with every inch of floor, wall and ceiling heavily reinforced.

The exterior walls were particularly thick, a foot and a half layered ultra metal and honeycombing, with an ultra metal glass at the same thickness for every window as well as for the dome. Even better, for every ten feet of the exposed structure, including see-through ones on the glass dome, there was a half a foot thick disk. In an emergency each disk would transform into another three foot thick barrier around the entire massive building, all of them interlocking with each other. This layer wasn't just solid ultra metal though. Instead it was an eight inch layer of interlocking ultra metal plates, kind of like a plated chainmail. The remaining thickness was super energy absorbent metallic foam. The idea was that metal plates would provide a certain amount of give with the foam behind it, allowing massive amounts of energy to be absorbed, while the energy absorbent foam itself would absorb and block things like radiological attacks, lasers or any other energy based weapons.

Of course, all of this was just back up protection anyway. The real defense would be the thirty layers of invisible energy shielding that would be surrounding the entire building, projected by over two thousand shield projectors.

When we were done with the general design, Tony started planning out the specifics, like the lab facilities, building infrastructure and basically everything else, while I started designing some of the things that would go into the facility. See-through ultra metal glass that filtered out radiation was the first thing I worked on, which I then immediately used to replace all of the glass in the Octopit using a building improver. I also made interior walls that could be deployed and hidden away from a central unit that could be mounted to a wall. Dozens of little things that were needed for a lunar base to function. Thankfully a lot of those things crossed heavily with what I had designed for my spaceship, which was currently making steady progress in Octopit.

The final thing I had to build was a combination between a dozen large object builders mixed in with quite a few building builders and building improvers. The final result was a group of connected building builders that Tony and I positioned around in a large circle on the surface of the Moon, twenty of them in total, all of them double stacked. The building would be constructed around the devices, allowing us to edit the building at any time to improve or expand it as needed.

When we were finally done, with the blueprints scanned and a truly massive amount of conceptually enhanced materials fed into the machines, I gave Tony the honor of pressing the start button.

"Well... here we go. One step for man, one giant leap for mankind." He said, before tapping the screen.

The machines hummed for a moment, something that was new to this version of the building builder. After a few minutes they began slowly carving away at the stone and dirt, flattening and digging into the surface of the Moon. It was a truly massive construction.

“You realize people will be able to see this with a hobby telescope, right?” Tony asked, watching as the improved building builders worked their magic.

“I’m aware.” I said, looking at the screen as the machine worked. “Not much we can do about it without messing with the perception of the entire planet. Good news is that we can use it as proof of what we are doing to anyone we invite.”

“Bad news is that it’s going to cause a lot of speculation and plenty of panic,” Stark pointed out before I could continue. “Probably not the good news.”

“Yeah... any ideas?”

“You mean besides not waiting to worry about it until the last moment?” He asked, and I shoved him in response. The low gravity made him tumble up for a bit before he could stop himself with his EVA suits thrusters.

“Yes, other than that.”

“I don’t know... you said that Wakanda had some pretty impressive projection tech right?”

About an hour later Tony returned home to spend some time with Pepper after almost none stop working for just short of two weeks. I, on the other hand, spent another day building a massive camouflaging system out of several scans of Wakandan tech, as well as a dozen other camouflaging elements. Once Ema and I put it down next to the large building space it projected a massive illusion over the entire area, which was incredibly confusing when you were on the wrong side of the projection, but completely convincing from high up over the Moon. Any experts, or anyone who decided to compare old images of this section with new ones would probably notice the difference, but it should pass muster with any hobbyist.

I studied my work for a bit longer before flying back to the warehouse, where Ema was already starting the clean up. We had been running the UCM’s near constantly for the last week, both to keep me supplied with everything I needed, but to prepare all of the materials the massive structure would need. In the end I had expanded the UCM section of the warehouse to almost twice the size and almost triple the number of machines to help keep up. Cleaning up was relatively easy and basically consisted of me carding and tearing anything that was still lying around, since at this point my resources were basically unlimited as long as I had one copy of what I needed.

When I was done I half collapsed and half sat down on one of the comfortable couches in the lounge area and let out a long sigh.

“How did my break turn into two more weeks of constant working?” I asked Ema, who had plopped down across from me.

“You get sucked into what you're building,” She answered, giving me a shrug. “Besides, while it is stressful and tiring, you're still having fun.”

“Yeah, you're not wrong,” I admitted. “Alright. I’m going to bed early. I’m taking an actual vacation tomorrow.”