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Virtual Surroundings: Unlocking the Value of Assets

## INTRO: THE BIG PICTURE

At Aviate Labs, we believe that there is a great efficiency increase ahead of us, thanks to the next evolution of digital things. But let's dial it back a little. For this case, we will refer to digital assets as Autonomous Assets (AAs). AAs are digital representations of physical things, granting them the ability to function independently, without the need for a central platform or marketplace.

For example, imagine having a digital twin of your student dorm, which you own as a digital asset. The access to your dorm could be stored in your digital wallet, which you can access in a matter of seconds through your smartphone. Now, take the following situation: you are leaving for warm and sunny Spain for your Erasmus exchange, and you decide to sublet your dorm to one of your friends. You can create and share a claim link via WhatsApp, allowing your friend to see and agree to the smart contract. On the start date, the contract will be triggered to transfer access to your friend, update the electronic lock, and exchange payment information. Any exchange between your friend, the house owner, or the insurance company can be facilitated through the Autonomous Asset, so you can enjoy your Margarita on a Spanish beach. Once you are back from your Erasmus, the smart contract will be completed, and access to your dorm will automatically be granted to you again.

Digital assets are not limited to dorms only. You can virtualize almost everything around you, including your house, car, sneakers (for rare sneaker collectors), historical artifacts, your Pokemon Go cards, and much more. This should make your life easier in keeping track of what you own and setting up pre-programmed actions, like lending something to friends, and much more. What else would you use this for?
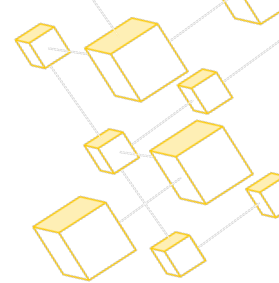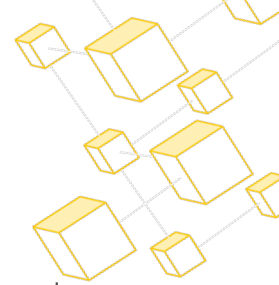
HELPFUL RESOURCES

Starting is often the hardest part of the challenge, here are some **resources** to help you hit the ground running:

1. What is Internet Identity?
2. Ethereum (solidity) version of a 721 NFT contract
3. Internet Computer (Motoko) example of a 721 contract. Written by aviate-labs

NOW, LET'S GET TO THE CHALLENGE:

Hooray! Now you have the basic tools to virtualize your surroundings & create digital twins of both tangible and intangible assets around you! But what's next?
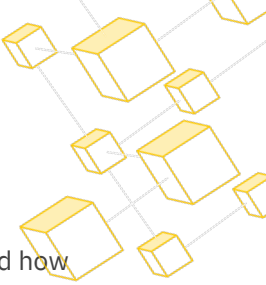
Think and come up with new business models, where AAs can be a part of your solution to help transform or increase the efficiency of a certain industry. Develop a mockup or prototype of your proposed solution.

Remember, Autonomous Asset Technology is just the enabling technology. You should use the capabilities of the technology to focus on an issue that could be solved through the security and autonomy that this framework provides.

WHAT WE'RE LOOKING FOR

Completeness and holistic approach matters! Try to connect these individual components to make a complete business case out of it. In your Business case include the following components:

- **Proof of business:**

    - Who's your customer?

    - Are they willing to pay for your solution?

- **Driving adoption:**

  - What industries or use cases are particularly well-suited for autonomous assets, and how can adoption be encouraged in those areas?

  - What strategies could be employed to encourage businesses and individuals to adopt autonomous assets?

  - How can the user experience of autonomous assets be improved to encourage adoption?

- **Addressing key issues::**

  - How will you address and work around censoring the circulation of illegal files (such as child pornography, violent activity, or use of drugs, etc.) while still keeping the file transfer scheme decentralized?

  - How will AAs be aggregated and indexed so that users are aware of the AAs that are in circulation?

- **Prototypes:**

  - Mint an NFT that people (your teammates) can bid on.

  - More components of your technical solution are always welcome!

INSPIRATION

To help you think, where such Autonomous Assets can provide value, here are some potential sectors, where AAs can be of great use! Don't limit yourself to the examples brought below & go beyond them to solve a true challenge!

- **Real estate:** Autonomous assets can be used for making digital models (or digital twins) for properties. This can make it easier for individuals to be able to evaluate the worth of a house they own after a certain amount of years with the purpose of selling the house more efficiently. Additionally, you can make the registration of the purchased estate instant by using a blockchain public registration system. Making it easier for the buyer and the seller of the real estate property by not having Similarly the same could be done with any vehicles or other tangible assets.

- **Content creation & IP rights:** One common dilemma we see in the web2 world is that the "big" content creators can (unintentionally) be credited for another "smaller" creators intellectual property. One example was the rise to fame of Charlie Damelio by using the choreography of another lesser known creator, Jalaiah Harman. Can you reimagine platforms like Tiktok and Youtube on a dApp, where intellectual property is preserved and creators are the true owners of their work? Could AAs be of any value here?

- **Logistics & Supply Chain:** Blockchains and supply chains are two separate concepts, but combined, these concepts can improve the security, transparency and efficiency of supply chain management. A supply chain refers to the process of moving products from the manufacturer to the end user. Blockchain can be used as the backbone to track the movement of goods and information in the supply chain, but it is not the only solution! How can this be combined with other technologies like edge computing, RFID, IoT etc. to improve traceability and efficiency of supply chains? Would virtualizing transportable assets bring value to the security and the reliability of supply chains?

HOW DO I START?

1. Go back to the Inspiration section and browse through the potential industries that could be revolutionized through the integration of blockchain technology.

2. After collecting some Inspiration, don't limit yourself to the industries or cases mentioned in the section, you can keep browsing and brainstorming with the team, and choose a direction or an industry that is the closest to your heart!

3. Once you are settled on the industry, you can start the sprint. Here are some of our favorite articles that will equip you with some of the best hackathon go-to tips & strategies!

   - [6 Tips to Help You Win a Hackathon… Without Having to Get the Gold](#) by Louise from aviate labs

   - [Hackathon domination: Proven Tactics for Winning](#) by Samuel from AFT

4. If you need extra clarification or guidance, send us a message through the Slack channels & we will be there to help!

5. Dare to Innovate: you are now ready to get started, we wish you an amazing hackathon experience & we are very thrilled to hear about your solutions!

F.A.Q
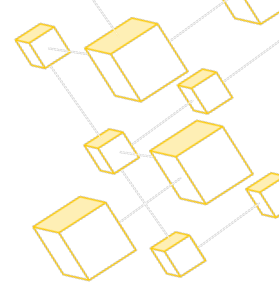
1. Are we allowed to go in any direction?

    a. Yes! You should feel free to choose an industry of your liking & interest. You can build a solution for more traditional industries, such as Supply Chain & Logistics of goods, you can opt in for blockchain in real estate or Intellectual Properties. If you like art or music, you can go into those directions! There are no industry constraints & limitations.

        - Important: the only thing you need to make sure of is that you are using blockchain technology (preferably the technological framework given described as Autonomous Assets).