

# Use Cases

- Potential Use Cases

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These are potential use cases that anybody can train a fleet of agents to be capable of doing once the full Fabric platform is live. Thought Labs itself may or may not develop these particular products.

## Energy Optimization

Problem:

Power grids like stability in order to balance the loads properly between substations. When too much or too little demand occurs, very expensive equipment can break, or millions of dollars worth of generated energy can simply go to waste without anywhere to store or transfer it.

Solution:

Thought's Smart Grid can be aware of all tenants' habits and power needs, both in normal and emergency/extreme situations. By predicting these outliers using weather data, historical data, maintenance records, and several other data points, energy providers can be alerted to potential failure points before storms hit. Recommendations can also be made for where redundant connections would be most beneficial for consistent uptime without blackouts. During emergencies, certain civic centers and hospitals can automatically be kept online while regions, locations, and even devices deemed unnecessary (like corporate park watering systems & skyscraper lighting during non business hours) can be put at the back of the line.

In times when far too much energy is produced, the excess can be automatically sold across third-party marketplaces and routed off-grid to be delivered to the customer, creating revenue out of what was once waste, and lowering the cost to supply electricity to on-grid customers.

## Smart City Governance

Problem:

Smart Cities are generating terabytes of data per day from millions of sensors, cameras, and monitoring systems. Energy, traffic, economy, safety, and other elements all operate mostly independently with their own departments of oversight, not entirely aware of how a decision impacts everything else outside of their division.

Solution:

An omnipresent AI agent who can balance resources, repair trucks, construction, security, economics, and more all at once, then bringing recommendations to a council that oversees the different departments, allowing them to do their jobs better and optimize city management continuously while new elements develop.

## Global Crop Management

Problem:

Every country is focused on its own cash crops and exports, without deep insights into what other market participants are doing until competing supply hits the market, potentially devastating all involved from the amount of revenues needed to maintain their economies.

Solution:

Thought is a secure and trusted platform that can integrate into an agricultural supply chain. From the time a farmer purchases crop seeds, the planting, farming, harvesting, shipping, and procurement are tracked and traceable. Farmland is monitored with smart device digital twins that receive real,

ongoing feedback from the field to show what's working and what's not.

As the fabric grows with smart data, additional intelligence from water level monitoring can drive water and fertilization management with the guidance of informed AI using public climate and demographic data. Harvest time and yield, sales, and transportation to wholesalers and retailers are all incorporated into an immutable, intelligent record. Buying and selling are facilitated through an Integrated Thought Grains Marketplace that uses THT for trusted and secure payment, while continuously increasing scale, scope, and efficiency through an AI-enabled platform.

In addition to monitoring local crop production, Thought agents can monitor global markets and make recommendations for what to plant in upcoming seasons based on real time developments happening around the world, to prevent situations like what happened to Cuba and Venezuela, who relied too heavily on one cash crop or resource for the nation's revenue, and were ill-prepared for inevitable market corrections. A trained Thought agent can stand by and guard 24/7, watching for market prices and global supplies are moving out of balance, then give warning to farmers, governments, economists, and commodity traders when upcoming crop planning is out of tolerance of projected market conditions. All of this months ahead of time based on forecasts, almanacs, and current data from Thought-enabled farms. It's not just disaster recovery, it's disaster avoidance. Thought can even make replacement recommendations for secondary crops based on soil conditions and global demands, with minimal disruption of current market dynamics.

## Cross-Enterprise Supply Chain Management

Problem:

Most products depend on other parts from third-party suppliers, who also rely on other suppliers for their materials, which come in from all around the world. The end customer of the product unknowingly relies on dozens of suppliers and companies and shipping routes all to function normally.

Solution:

Thought's supply chain can be aware of all vendors and elements throughout the supply chain, without revealing more information than is necessary for knowing when things are going to arrive,

allowing everybody in the chain to keep their promises and deadlines. When something does go wrong, Thought has the ability to seek out inventory across other ecosystem participants and auto-order replacements and cancel backorders, assuring that when someone else has a problem, it doesn't soon become your problem.

## Military Simulations

Problem:

Poor training and misunderstanding data can lead to massive casualties.

Solution:

Pilot and ground training simulations, as well as entire war scenario simulations can be played out, potentially preventing a violent conflict entirely if the consequences were able to be understood in advance. Thought is not developed with the intention to control massive war systems, but rather highlight the true enormous cost of entering into a conflict, and encouraging diplomacy beyond what those involved might think is possible, once they see the bill in advance.

## Infrastructure Project Simulation/Management

Problem:

Developing plans for a new highway or railway takes years of ecological surveys, economic planning, and understanding the impacts of positioning future on/off ramps in certain areas, as well as how lanes of traffic are likely to be required over the next half-century.

Solution:

Similar to the war simulations, Thought can combine enormous environmental and economic datasets and analyze them simultaneously with predicted population growth, costs of moving or routing the road around certain areas, and make an optimized recommended model that provides the least ecological disruption, and generates a thriving surge for nearby villages instead of putting local shops and stops on current small highways out of business.

## AI Gaming

Problem:

Play hours and replayability are two elements that static games can't help. Doing the same thing over and over again is only fun for so long, and then players will move on to the next new thing. This is a problem when competitive games now require years to make, and hundreds of millions of dollars to develop, only to be appreciated for weeks or months.

Solution:

Thought's AI Director can create continuous level re-design and difficulty adjustments in real-time. The gameplay will be slightly different every time, keeping players of all levels challenged and entertained, with more personalized experiences being possible when connected to the player's own social media networks. The AI Director can also continuously create its own custom levels, campaigns, items, and characters for an ever-evolving universe aside from the canon made by the original human development team.

# Digital Twins

## Problem:

As “analog” lifeforms, players are constantly having to re-create images of themselves as avatars on social media, in games, on forums, and within metaverses. There's a lot of redundancy and inconsistency. That's just the design...

## Solution:

An AI that is trained to be you, when you're offline. Studying your personality, style of writing, humor, beliefs, and everything else you train it to know, in a way can make oneself feel like it will live on forever. This digital twin is also able to replicate itself cross-platform and in different areas, potentially even making friends for the original to meet. In a giant world of 8 billion people and counting, there's never been an epidemic of loneliness quite like there is today. Digital twins actively searching for like-minded companions across hundreds of platforms simultaneously could deliver the camaraderie so many of us want, but don't have the time and energy to search for after working long hours, or dealing with other mental health issues.

# Collaborative & Intelligent Healthcare

## Problem:

Point personal health solutions - phones, rings, cardio-devices, diet apps, don't work cohesively to offer a comprehensive and persistent thread of the true health picture of an individual, curtailing what could otherwise be great information and abandoning it at the device level. Diagnosis of any current or preventing future health concerns can't be predicted or remediated. Human doctors are woefully overworked and cannot find time to pay close attention to each patient's individual needs and wellness mapping.

## Solution:

Opt-in integration with realtime personal device sources can more effectively predict and deploy individual healthcare plans. Actual sedentary/activity levels, heart rate, blood pressure, integration with shopping applications/credit card records to track diet, sleep levels and blood/testing results, as well as potentially opt-in DNA analysis, can better monitor and interpret, and anticipate and aid in abetting potentially negative health consequences. Tracking emotional state, fatigue from facial recognition and linking with other anonymous such Personalized Health agents can determine if certain areas might be at risk for greater environmental caused ailments which individuals might otherwise not see in aggregate.

AI Agents can be aware of all of your health signals and data over time. This can include inputs from inpatient care facilities. The Agent can provide predictive and preventative recommendations, such as which human specialists are out there that have the most experience successfully treating conditions and situations like yours, and warn you in near realtime if you are doing something that may make your health worse.

# Adaptive Financial Management

Macro-focused Risk Assessment for Hedge Funds

Problem:

Hedge fund managers have a sea of data to consider when trying to call the top or bottom of a market. Most are pretty good, but within a 5-10% tolerance. Getting a little closer to the edges could make an enormous performance difference for a fund that only does itself 12-15% annual return.

Solution:

An AI agent is able to consider dozens of factors at once that the human attention span isn't able to weigh all at once, along with a hundred years of historical data the last time these same conditions were present. Able to adjust its algorithm in real-time, and assess each market individually as well as a whole, it sends alerts to fund managers when it thinks the best time is to enter, exit, reduce risk, add risk, and even auto-accumulate during bear markets at the best possible prices.

For funds of funds that are not day-trading, the agents are on constant alert for announcements of new fixed-return products and alert managers whenever there is a better yield available on a product similar to something in their portfolio or product tolerance.

## Intelligent IoT

Using sensors to train home automation to augment our behaviors.

Problem:

Houses are inert objects we must physically interact with to initiate change. Traditional home automation tries to bring these spaces to life and do a decent job, but they run primarily on timers or motion sensors, which leaves much to be desired. Energy is wasted by lighting and heating a house too soon; or, if it all kicks on once the owner is already there, its purpose is totally defeated. With a little more intelligence and awareness capabilities, the energy savings across the entire grid could be substantial. Lowered demand and bills in peak times could save end-users billions of dollars a year collectively.

Solution:

Agent-powered automation with coordinated sensors just outside the home, tying in your car, phone, shoes, or other IoT-enabled devices to send information on your whereabouts and normal behaviors. There are already Smart Faucets that will prepare a bath for you when you typically are on your way home from work, but what if you decide to go out that night? The AI can detect a check transit pattern for usual behavior before preparing the bath. In waste-conscious societies like Japan, this added feature would be most welcome. Auto-ignition and dimming lights as one walks through the house, along with the ability to detect when someone is reading to enhance the amount of light in the

room. Track lighting can be motorized for the lights to be able to bend, turn, and reposition themselves depending on what the people in the room are looking at.

Commercial and industrial solutions for tracking company assets and their maintenance necessities are also available. Never leave that one tool or part back at the shop that you needed later, with Intelligent Load-in Agents.

## Crypto Transaction Routing

Find the quickest/cheapest path from one asset to another across every L1/L2 including wrapped and synthetic tokens.

Problem:

Ethereum gas cost has risen so dramatically that the entire point of the network's efficiency through smart contracts has been usurped by its expense. Crypto was invented in-part to counter the absurd fee banks charged for transfers, yet Ethereum swaps can now cost upwards of hundreds of dollars, and mints/smart contract deployments now can be thousands of dollars worth of ETH. Layer-2s, side-chains, and bridges to other L1s have been constructed to help alleviate some of the demand, but growth has kept pace and no significant reduction in cost has been achieved.

Solution:

An omni-present intelligent routing agent, aware of all L1/L2 congestion and current fees. Based on the user's described target and constraints, Thought's Crypto Routing Agents automatically send, swaps, and return the maximum requested asset at the lowest possible cost. With some platforms/exchanges offering free ETH transactions for certain tokens (like USDC from Coinbase at the time of writing), having this kind of service can save a user thousands of dollars in fees over time.

# Adaptive Learning Environments

## Problem:

Because students are so complex and multi-variant - sleep, nutrition, health, social well-being, environment (safety, noise, size, etc), seat location, learning style and more - it's almost impossible to sort out and maximize best results for the individual and class how time can be best applied for learning.

## Solution:

Thought's intelligent application-based agents will be best suited to analyze data for the individual as well as share back data with the Thought fabric for collective group decision-making. Because Education plans, teachers methodologies and approach and subjects are also so varied, individualized Nuances can grow with each student to understand how the student best learns with prompt and response, comparing varying stimulus but also as deployed in aggregate, determination for best group dynamics, engagement and learning, advising on appropriate sub division into sub-groups and learning modules for maximizing learning techniques efficacy.

# Intelligent Customer Retention

## Problem:

Feedback begging and customer surveys are the only forms of two-way communication between most retailers and their customers. Customers feel bothered by these approaches and typically will engage only when they have a strong complaint.

## Solution:

Multidimensional aspects of customer experiences are shared across the Fabric across differing industries and companies. The Pain Points of the Internet can be better studied collectively, instead of each corporation's marketing department scratching their heads and trying to guess why a visitor

falls off their website or leaves items in the cart unpurchased. With continuously updated Best Practices from constant inflows of new data, trends can be reacted to on the fly for a better experience internet-wide within weeks instead of years.

## International Compliance & Bureaucratic Management

Problem: International business planning and law is hopelessly opaque and beyond reasonably challenging with so many layers of legal jurisdiction and differences from countries to counties and cities.

Solution: Agent-based awareness continuously stays apprised of legal changes worldwide to business and tax law, providing insight and suggestions for jurisdictional arbitrage and tax optimizations for corporate headquarters, and franchise locations. Instead of months of expensive legal teams in different countries all trying to piece a puzzle together, one agent can take a business concept and display results in minutes for a best path forward, saving enormous amounts of time and money, listing best areas, licenses needed, fees required, legal bodies that require annual registration, and a cleanly ordered to-do list to get the global enterprise up and running.

## Legacy Banking Interoperability

Problem:

Transfers between banks take a lot of manpower and time because none of the forms match. There are different requirements for what information is needed, for what information is included, and money can and does actually get lost during international wire transfers.

Solution:

An agent becomes aware of all banking details and forms, and ensures all the correct information is sent, verifies receipt, and completion of transfer, as well as documentation of each hop in the transfer takes between intermediary banks. It can run compliance checks as needed by certain countries depending on the type or amount of the transaction as well, before the transaction is ever sent, ensuring that only good clean transactions ever enter the system in the first place, which would clear out an enormous amount of tedious labor and wasted time.

## Business Insights/Analytics

Problem:

Traditional business data analysis is a zero-sum game of you vs you. It's an exercise in starving your core engine to meet emission requirements (maximize profits) for shareholders.

Solution:

AI runs simulations for optimization for all aspects of your business, allowing adjustments to be made on the fly, with minor tinkering here and there instead of drastic budget slashes and changes when a company can only take a blind guesswork approach to what might work better. With hundreds or thousands of simulations in place, proving the path forward is the best one, both management, shareholders, and employees will benefit from stability and knowing best practices are already implemented.

## Omnipresent Cybersecurity

Problem:

Computer networks and blockchain smart contracts are under constant attack from botnets and cyber warfare units from sanctioned countries. Firewalls, anti-virus, and audits are good but not always good enough.

Solution:

A blockchain network can have AI operating at the node mempool level, becoming aware of unusual transactions and rejecting obvious hacks/pool drains, while also learning about new hacking techniques as they become published, and run continuous white-hat efforts on all contracts within a participating ecosystem, alerting developers to issues that could impact them in the future.

## Workforce-as-a-Service

Problem:

The most talented people don't need to work for anybody anymore. Employee-level talent can be unmotivated, untrustworthy, and perpetually in need of more money/benefits. As a startup entrepreneur, you must raise several millions of dollars in capital in order to hire a competent core team to get your idea off the ground.

Solution:

World-class trained agents can come online as entire departments of a startup, from c-suite to customer service, dropshipping, design, and accounting. A small 20-50 head business can be orchestrated by one or two founders, cutting out a ton of training time, initial costs, and reduce the time it takes for founders to pay themselves from years to weeks, with the biggest difference being proven lead generation and marketing techniques right out of the gate for traditional business ideas.