BlockTrace

Every product has a story, we tell them all.

INTRODUCTION

The European Union has introduced new regulations aimed at promoting a circular lifecycle for products imported into its market, requiring each asset to include an identity record known as a Digital Product Passport (DPP). The **question** is: how to create a system that allows for traceability, auditability, scalability and trustworthiness? Our **answer**: Permissioned blockchain.

SOLUTION

We've built a **permissioned blockchain** to store Digital Product Passports (DPPs), which track the full lifecycle of each product. The network integrates with a secure **web app**, connecting users and companies. Anyone can view the data, but only owners or authorized users can edit it. This ensures data integrity and delivers traceability, auditability, scalability, and trust — with full control via an intuitive interface.

WHAT MAKES IT DIFFERENT

We use blockchain technology that **minimizes infrastructure costs** while ensuring **data immutability** and **traceability**. The network is **scalable** by design, and its permissioned architecture allows **controlled** write access while remaining fully **auditable**. Combined with a **user-friendly web application**, the system builds trust by making blockchain data accessible to everyone, while preserving **security** and **integrity**. A key advantage is the ability to trace each product and **verify ownership at any point** in its lifecycle, thanks to a property control system that enables users to **manage and transfer their assets securely**.

INDUSTRY LANDSCAPE

As mentioned earlier, any company aiming to access the EU market must comply, turning regulation into a global business imperative. Early adopters of scalable and verifiable tracking systems **gain a competitive edge** and **prepare for similar frameworks in other regions**. By enabling robust product identity and lifecycle

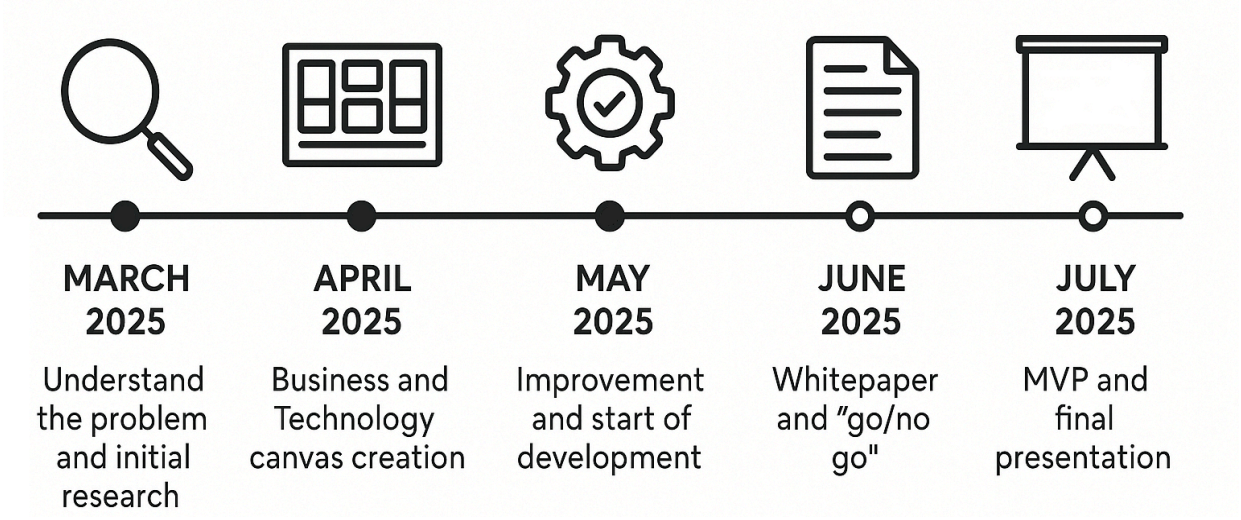
visibility, companies not only **meet legal standards** but also **improve supply chain accountability** and unlock new circular business models. Adopting such a solution becomes a **clear market differentiator**, enhancing both **brand credibility** and the **value of offered services**.

WHY BLOCKCHAIN

Blockchain is a technology that enables the **decentralization of information**, meaning data is distributed and replicated across multiple entities. This architecture guarantees **integrity** and **trust** whenever information is created or updated. As a result, the system provides enhanced **security**, **auditability**, and **tamper-proof assurance**, reinforcing confidence in product data throughout the entire lifecycle.

ROADMAP

The project follows a structured roadmap aligned with academic deadlines and development goals. From initial research to prototype implementation and final presentation.



CONCLUSION

BlockTrace presents a **practical, future-ready solution** for product traceability and regulatory compliance. By combining permissioned blockchain with an intuitive interface, it ensures **security, transparency, and ownership control**. As global standards evolve, BlockTrace positions itself as a reliable foundation for **trust in product data**.

Want to know more or collaborate? Let's talk.