

1 Use Case 2- Demand planning

Demand planning is affected by a notorious problem: **forecast inaccuracies** cost billions every year to almost all complex value chains, mostly due to **information asymmetries among the participants** (see Figure 10). At ORS GROUP, we are already solving this problem with Hypersmart Solutions that produce and harmonize independent forecasts at different hierarchies. The demand planning HSC shall link the **Blockchain-based collaborative information sharing** possibility to the off-chain artificial intelligence of Hypersmart Solutions, creating a **fast collaborative, consensus-based forecast process aiming at improving forecast accuracy for all participants** throughout the chain. Participation is fostered by the issuance of **crypto-rewards** to participants sharing both valuable and accurate information (the verification is automatically performed by specific HSC). **Public key cryptography ensures that information is visible only to the HSC**. Figure 11 shows how the process works:

- ⊙ **Information sharing** for collaborative demand and supply planning is obtained through the Blockchain
- ⊙ **Cryptocurrency payments** are to be released as a **reward** for information (including estimates) sharing, accuracy and utility
- ⊙ **A.I. Algorithms** compute the forecasts, automatically exchange data with ERP systems, discover information incongruencies and inconsistencies and in general **reduce forecast errors** and therefore save money to all participants of the value chain
- ⊙ The Hypersmart Contract 'buys' the computational services of the algorithms and delivers both the results as well as it releases crypto reward payments to some participants

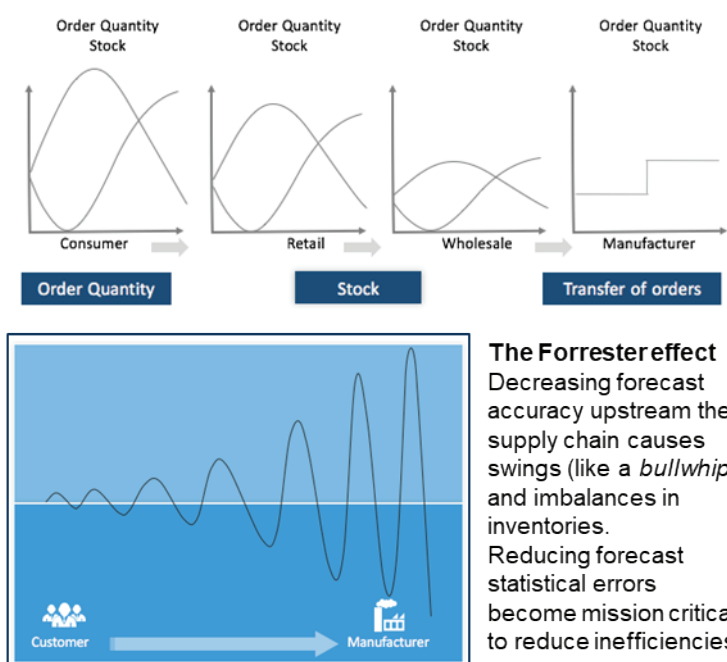


Figure 1. The consequences of information asymmetries along complex value chains

The **first reward** (participation reward) is given to all the participants willing to share proprietary information, since their data is valuable for improving demand and supply forecast accuracy. The **second reward** is given if certain (computed) information quality and utility criteria are met.

*** n is defined upfront, as for every communication specification

**** <http://www.ors.it/index.php/de/30-ors-de/company/stories/258-raise-the-scm-optimizer>

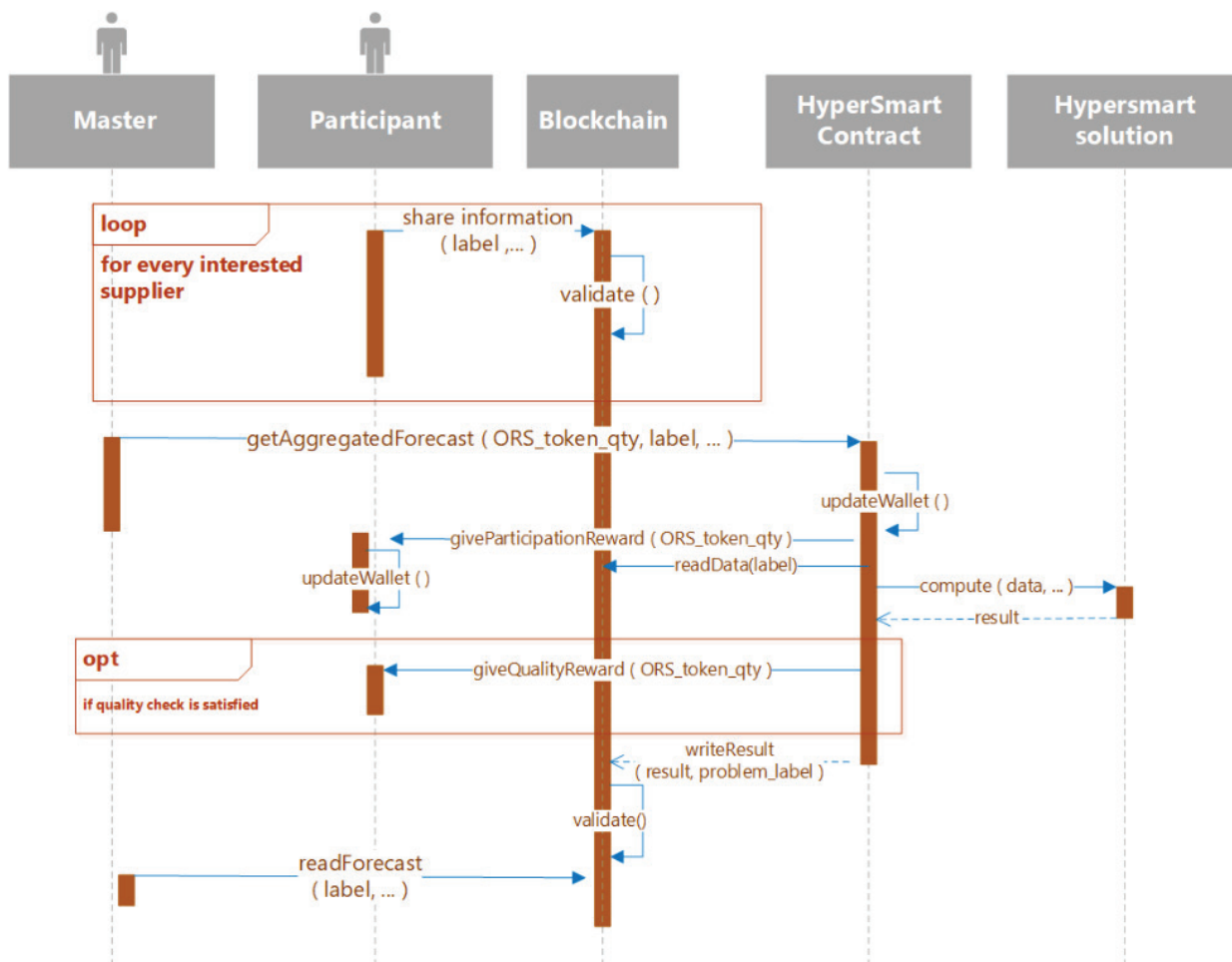


Figure 2. The demand planning case with a rewarding scheme