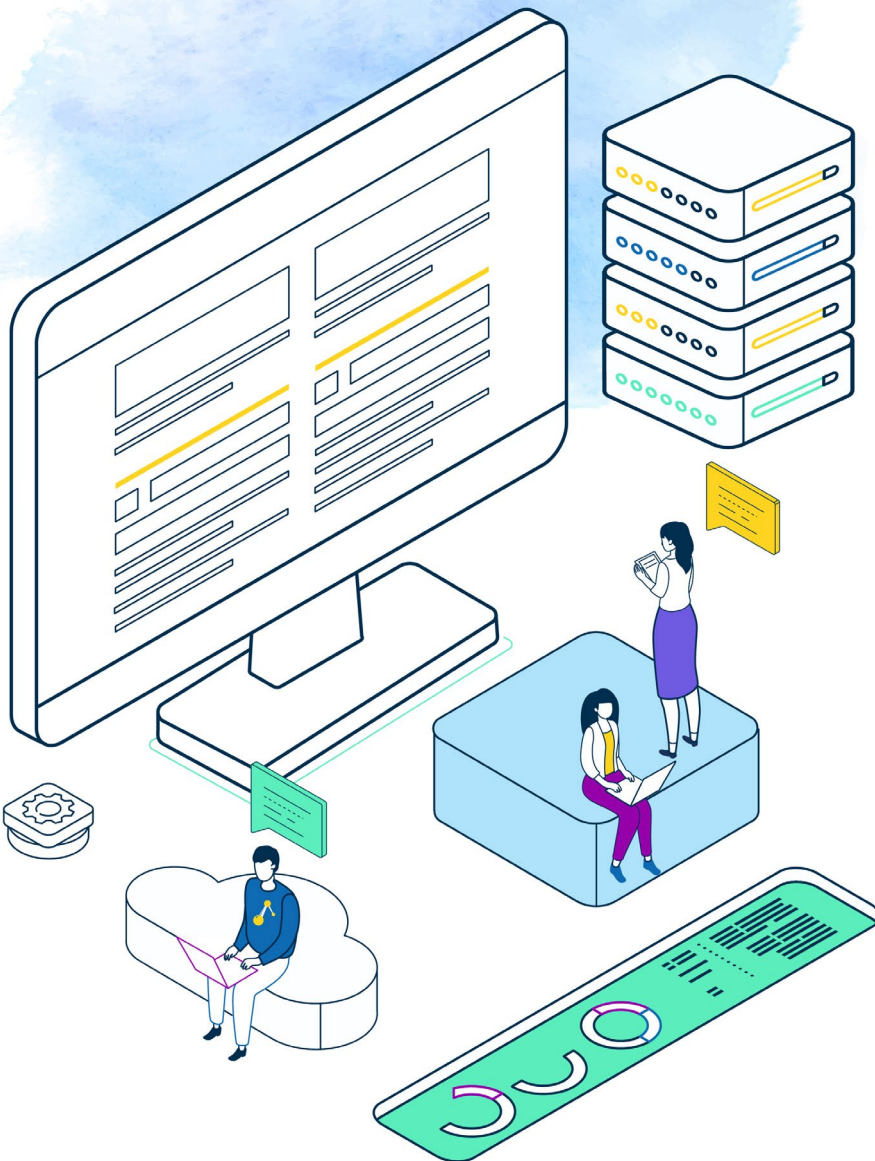




SEAGATE

# Case Study

## Merging E2E planning with daily execution



### The company

**Seagate Technology** public limited company **STX** (NASDAQ) is a provider of electronic data storage technology and solutions. The Company's principal products are hard disk drives (HDDs).

In addition to HDDs, it produces a range of electronic data storage products, including solid state hybrid drives, solid state drives, peripheral component interconnect express (PCIe) cards and serial advanced technology architecture (SATA) controllers.

Its storage technology portfolio also includes storage subsystems and high-performance computing solutions. Its products are designed for applications in enterprise servers and storage systems, client compute applications and client non-compute applications.

**From yearly planning down to daily execution of plans, all in one system. That is the power of S&OP combined with S&OE**

It designs, fabricates and assembles various components found in its disk drives, including read/write heads and recording media. Its design and manufacturing operations are based on technology platforms that are used to produce various disk drive products that serve multiple data storage applications and markets.

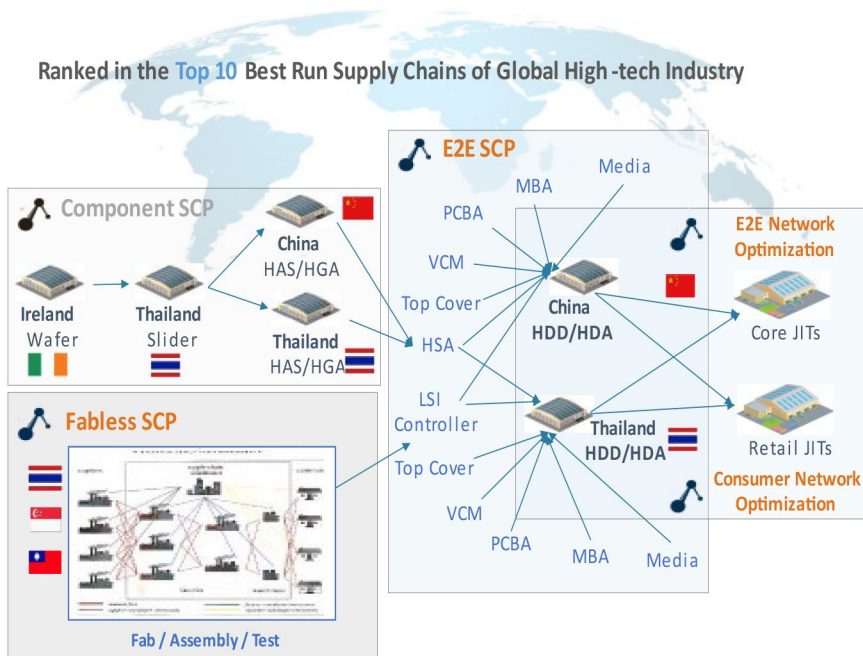
## The challenge

Seagate has a vertically oriented supply chain with 575 sites for raw materials, WIP and finished goods. It has three main business units, namely Seagate Silicon, E2E and Consumer. Although the company ran Oracle ERP, there was no effective system in place to optimize supply chain plans and align the company top to bottom.

With over 3,000 part numbers and more than 190,000 substitution options as well as millions of work orders on daily basis, the management needed better visibility as to what to make, where and when.

The business also needed a better way to deal with supply chain risk by proactively identifying bottleneck resources, material shortages, and orders deviating from forecasted demand. The figure below shows the worldwide operations and interaction of business units.

## Seagate integrated E2E planning





## Operational Requirements and Challenges

- Teardown and rework
- Scalability — # of demands and component configurations
- Drive capacity waterfall
- Communication with suppliers
- Cultural changes within STX (planners, customers, supporting groups)
- Executable plan
- Provide daily production and shipping orders

The supply chain planning requirements were for yearly, monthly, weekly and daily processes. Yearly and monthly plans to determine how to allocate and configure capacity to match demand for product families and plan long lead time items. Weekly process to plan makes to stock orders. Daily plan for make to order products and items at risk of stock out.

## Adexa Solution

Adexa's combined S&OP and S&OE solution produces executable plans autonomously without manual intervention, optimizes sourcing, provides visibility of the end-to-end supply chain, and proactively identifies potential problem areas. It also provides predictive analytics to determine trends and identifies risks. Adexa provides optimized solutions for each of the Seagate businesses and due to a common data model is able to link the solutions to provide full supply chain planning capability.

Integrated to Oracle ERP system for transaction data, the system runs on a daily basis. By performing continuous planning, it makes adjustments to the plan based on changing demand data, both short term and long term. Adexa also optimizes the Consumer business network for both the maximum use of available HDD inventory and sub-contractor sourcing. The result is used to provide end customer promise dates and the HDD build requirement for the factories.

The end-to-end solution considers both the capacity waterfall and component substitutions resulting in minimizing component purchases, controller builds and wafer starts. Finally, for silicon operations, Adexa synchronizes the activities of a multi-layered sub-contractor network minimizing cost. The output of the Silicon operation is provided to E2E as controller supply.



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## The Benefits

The major benefit to the entire company has been the way the plans are generated taking into account all the possible constraints of material, capacity and business constraints proactively and generate plans that are immediately executable.

No more need for planners to spend their evenings at the end of the quarter to try and make the plan work!

### Benefits publicly reported by Seagate:

#### Improved efficiency

- Reduced planning process by up to 50%
- Created plans that are executable with little to no manual intervention
- Freed up resources to go after more enhancements

#### Accuracy of plans have improved

#### Capturing 50% more demand upsides within LT in consumer

#### Reduction in inventory

#### Much better visibility

- Immediately identifying mis-positioned inventory
- Optimal use of all existing components and FG before additional purchase or production
- Increased capacity and component shortage visibility
- Pinpoint root causes impacting on-time delivery

#### Faster response and increased velocity of doing business

#### Supply chain process and modeling knowledge gained

**For more information** on this case study and other supply chain topics please contact [info@adexa.com](mailto:info@adexa.com)

