How a Latecomer Company Used IT to Redeploy Slack Resources

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Executive Summary

Latecomer companies are those that have been slow in adopting modern enterprise systems. A key feature of latecomer companies is that they have been automating operations and digitizing administrative processes but their efforts have generally been local and segmented, which limits information exchange and makes resource coordination across business units difficult. As a result, slack resources emerge—i.e., the resources available in a company exceed the demands. Some slack resources are digital, such as computing power and storage, while others are non-digital, such as financial capital, production facilities and material inventories. An important role of CIOs of in latecomer companies is to redeploy slack resources into productive use.

Modern enterprise systems, such as ERP, play an important role in redeploying slack resources. A company with excess material inventories cannot do anything with the slack unless it is able to determine the exact demands for the materials and identify the slack components. Because the need for materials is affected by sales and production plans, slack discovery requires integration across sales, production and procurement. Modern enterprise systems are designed to provide exactly this type of cross-functional integration.

The full article describes an in-depth case study of a latecomer—XCMG, the largest construction machinery manufacturer in China. XCMG has five major established subsidiaries: hoisting machinery, bulldozers, road machinery, excavators and concrete machinery. It also has newer subsidiaries specializing in products such as sanitary machinery and fire-fighting machinery. Based on the SAP ERP-based digital transformation completed by XCMG, we have derived a four-phase process model of IT-enabled slack redeployment.

Four Phases of IT-Enabled Slack Redeployment

1. **Track**
   Track all the resources to determine the stock

2. **Discover**
   Discover slack resources by determining demands

3. **Collect**
   Collect slack resources into a central pool

4. **Dispense**
   Dispense slack resources to business units that need them

The Track phase determines the stock of all resources and builds the foundation for slack discovery and redeployment. The Discover phase determines resources needed to carry out operations and, thus, identifies the slack resources. The Collect phase gathers slack resources from local contexts into a central pool so that they are ready to be redeployed. The Dispense phase moves slack resources to places that need them so that they can be used productively.

**Phase 1: Track All the Resources to Determine the Stock.** The first phase of slack redeployment takes stock of the resources available. Prior to the introduction of SAP, obtaining the required information in many of XCMG’s subsidiaries was not easy because they tracked resources manually. The implementation of SAP unified the standards so that data about resources could be consolidated across subsidiaries.

**Phase 2: Discover Slack Resources by Determining Resource Demands.** Phase 2 determines the demands for resources and thus uncovers the slack in resources. But determining the demands is complex because of...
the interdependencies between business functions. The resource demands in one business function depend on other business functions. For example, procurement and the sales pipeline are major determinants of the demands for financial capital, and production is a major determinant of the demand from material inventories. When production ramps up, more parts will be needed and fewer parts will be slack. Before the introduction of SAP, procurement and production were not integrated in most XCMG subsidiaries.

**Phase 3: Collect Slack Resources into a Central Pool.** The purpose of this phase is to gather slack resources scattered across the organization into a central pool. At XCMG, excess capital was moved to a central capital pool, managed by an investment subsidiary. Slack production facilities and excess material inventories were moved to shared (but virtual) global pools, and central production and procurement subsidiaries were established to manage these pools.

**Phase 4: Dispense Slack Resources to Business Units That Need Them.** The final phase is to dispense slack resources to areas of the business that can use them productively. At XCMG, excess capital gathered from established subsidiaries can now be lent to newly established subsidiaries or to external borrowers. Excess production facilities collected from subsidiaries facing declining sales can now be leased to subsidiaries that need extra facilities, or to local competitors. The central procurement subsidiary can now dispense excess material inventories to other parts of the business that needs them. In each case, the central IT department built systems to facilitate the dispensing of slack resources.

**Recommendations for CIOs**

1. **Do Not Allow IT to Cause Slack Resources.** Fragmented IT systems are a major cause of slack resources. To overcome the constraints of fragmented systems, CIOs should establish a corporate-level enterprise architecture that all systems adhere to, with the objective of building an integrated IT systems portfolio.

2. **Redeploy Digital Slack Resources by Using a Shared Cloud Service.** Decentralized IT management is a major cause of digital slack. CIOs should address this issue by establishing a central authority to coordinate different business units’ IT activities as they adopt a shared cloud service.

3. **Track Resources by Digitally Recording and Monitoring Them.** CIOs should ensure that all resources are recorded digitally using a company-wide standard so that they are universally recognized. They should also deploy new technologies such as smart sensors and QR codes to monitor the use of resources.

4. **Discover Slack Resources Through Cross-Functional Integration and Analysis.** Real resource demands are often unknown because of the level of resources used as a safety buffer. By enabling cross-functional integration, enterprise systems play an important role in determining the real demands and allow business functions to have real-time access to each other’s work plans, translating those plans into resource demands. CIOs also need to build BI capabilities that transform the integrated data into meaningful insights.

5. **Collect Slack Resources by Establishing a Shared Pool and a Central Authority.** Slack resources scattered across the organization are embedded in their local contexts and are inaccessible to others. CIOs should provide IT support for shared resource pools that free slack resources from their local contexts. Management of a shared pool requires a central authority responsible for coordinating resources across boundaries and making more productive use of them.

6. **Dispense Slack Resources by Creating Online Markets.** CIOs should establish online platforms 1) for subsidiaries to exchange resources with each other—e.g., internal banking and procurement systems, and 2) for subsidiaries to exchange resources with external parties—e.g., facility leasing system. A central authority will be needed to control and coordinate the resource exchanges on a platform.

In conclusion, many companies slow in adopting enterprise systems are catching up. A major challenge that these latecomers face is the prevalence of slack resources, which are becoming an everpressing issue in the face of a slowing economy. Although modern enterprise systems play an important role in redeploying slack resources, IS research has not previously studied enterprise systems from this perspective. XCMG’s integrated ERP system enabled the company to redeploy many slack resources for productive use.

Note, though, that the findings and recommendations derived from the XCMG case may not be applicable to conglomerates with largely different units. However, companies such as XCMG, with similar business units performing similar functions and using similar resources, are not particularly rare. Examples include car manufacturers with multiple brands, and global manufacturers with production facilities in different geographical locations.