

# Between Anarchy and Dictatorship

## A Framework for Information Technology Decisions

by Ron van Kemenade, Saul van Beurden, Heiner Himmelreich, and Hanno Ketterer

**M**anaging a global company's IT comes with a host of challenges. One of the most difficult involves striking an optimal balance between centralized and decentralized decision-making. Which choices should be the purview of local or regional IT organizations—and which decisions need to be made by global leadership? Too much decentralization and independence can lead to redundancies and unnecessary costs. Too much centralization risks forcing inappropriate solutions on situations that might be better served by uniqueness or customization.

Dutch global banking giant ING recently tackled this challenge in its Benelux operations. The company's solutions and underlying thinking offer food for thought for other businesses that are wrestling with the same issue.

### A Question of Ownership

ING has multiple lines of business—including retail and commercial banking, investment banking, online banking, and insurance—in the Benelux region. The supporting IT is a web of capabilities and link-

ages that serves a wide range of business- and location-specific needs. These include, for example, customer account data that can be accessed by multiple business lines, such as retail banking and commercial banking; and country-specific needs, such as reporting to local regulators.

The degree of complexity across the system is high, given the mix of commonality and uniqueness, and there are overlapping spheres of interest among local and centralized IT leadership. Over time, ING increasingly found itself facing questions about ownership rights whenever a technology-related decision had to be made. If a system unique to one country needed to be replaced, who had the final say on what to replace it with? In the case of software shared across the region, to what extent could a country customize that software to meet specific needs?

Rather than continuing to make such decisions on a case-by-case basis, as had been its custom, the company ultimately decided to develop a single, codified approach, one that would remove any questions about consistency and transparency. The trigger event for this

decision took place in 2010, when a newly appointed board member responsible for the banks in the Benelux region requested a target architecture and IT road map that identified possible synergies. As the IT organization began to develop this, it realized that there were no clear guidelines that specified the balance of power between regional headquarters and individual countries in the region with regard to information technology decisions. Hence, the task for IT leadership was clear: design an if-then framework that clearly spelled out decision criteria that all parties could understand and align with.

### A Framework for Decision-Making

In *Enterprise Architecture as Strategy: Creating a Foundation for Business Execution* (Harvard Business School Press, 2006), authors Jeanne W. Ross, Peter Weill, and David C. Robertson established a framework for the development of a company's (or business unit's) operating model. The model is a two-by-two matrix, with business-process standardization and business-process integration (the latter defined as the degree to which units are linked through shared data) as the framework's

axes. Where a company is located in this matrix determines its optimal operating model: “coordination” (a high degree of integration coupled with a low degree of standardization), “unification” (high integration, high standardization), “diversification” (low integration, low standardization), and “replication” (low integration, high standardization).

ING found this framework compelling and decided to use it as the basis for its own customized framework for the definition of IT operating models, which would guide related technology decisions. Standardization and integration would remain the key variables, per the Ross/Weill/Robertson framework. But ING defined them differently:

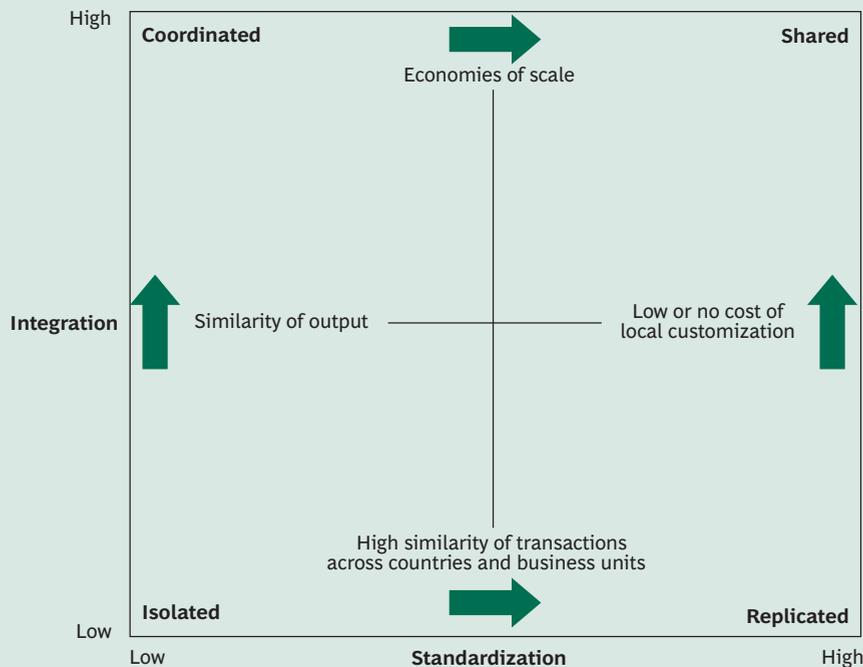
standardization would refer to the similarity of transactions across countries or business units, while integration would refer to the similarity of outputs. ING called the four resulting IT operating models “coordinated,” “shared,” “isolated,” and “replicated.” (See Exhibit 1.)

A coordinated model would be the default choice for situations with high integration and low standardization—for example, multiple countries using their own distinct software to produce standardized output, such as a prescribed format for reporting key risk ratios. A shared model would be the default for situations combining a single solution and a single output, with little or no need for local customiza-

tion—for example, multiple countries using a single general ledger to comply with GAAP reporting standards. An isolated model would serve situations demanding multiple solutions for many different types of output—for example, individual countries using their own unique systems for tax reporting or local sales support. Finally, a replicated model would be the default for situations in which a single solution satisfies multiple types of output—for example, a single packaged-software solution for retail banking that is used across countries but is customized to meet different countries’ individual needs.

With this framework in place and the models defined, ING now had

### Exhibit 1. Standardization and Integration Drive the Choice of Operating Model



Sources: ING; BCG.

an established and transparent logic for decision-making. But other factors would influence those decisions as well. Before applying a prescribed model to a specific situation, ING would ensure that certain preconditions were met. For a coordinated model, for example, ING would confirm that the right governance was in place to ensure the implementation of common metrics across the different systems. For a shared model, ING would ensure that the governance organization could maintain the shared solution and that the

costs of adjusting the shared system to different local requirements were low. For an isolated model, ING would confirm that there was sufficient local scale to justify a unique solution and that there were sufficient local skills and resources available to implement and maintain it.

ING would also conduct a thorough cost-benefit analysis. When judging the suitability of a shared model, for example, ING would weigh the potential economies of scale against the costs of the coordination effort

and the greater financial impact if the solution were to fail. For an isolated model, it would weigh the flexibility and agility gained by each individual market against the greater run and maintenance costs and the costs of achieving the necessary cross-market transparency (for reporting purposes or to support selling efforts beyond the local market, for example).

Finally, as shown in Exhibit 2, ING would consider the risks associated with a model along with ways to

**Exhibit 2. Operating Models Have Different Benefits, Risks, and Costs**

	Isolated	Replicated	Coordinated	Shared
Example	Each country uses its own (unique) IT system (for example, for tax reporting)	A single packaged solution (for example, packaged software for a greenfield startup in the retail banking sector) is used by all countries but implementation differs by country	Each country uses its own software but the output is defined (for example, key ratios for risk management reporting)	A single application is hosted one time only in a single country but also used by other countries (for example, a single-instance installation of a group general ledger)
Benefits	<ul style="list-style-type: none"> <li>Flexibility and agility for the individual markets</li> </ul>	<ul style="list-style-type: none"> <li>Flexibility and speed for new market entries</li> <li>Option to redeploy staff to support replicated systems in other markets</li> <li>Ability to leverage purchasing power with regard to software vendors</li> </ul>	<ul style="list-style-type: none"> <li>Transparency across markets with regard to defined metrics</li> </ul>	<ul style="list-style-type: none"> <li>Economies of scale</li> </ul>
Risks	<ul style="list-style-type: none"> <li>Lack of transparency</li> <li>Choice of subpar solutions owing to lack of knowledge</li> </ul>	<ul style="list-style-type: none"> <li>Divergence of solutions, which can lead to erosion of benefits</li> </ul>	<ul style="list-style-type: none"> <li>High risk of errors owing to complexity</li> </ul>	<ul style="list-style-type: none"> <li>Long reaction time to changes in the environment</li> <li>Inflexible solutions that do not suit a variety of users</li> <li>A major distortion of business processes when the system is down</li> </ul>
Costs	<ul style="list-style-type: none"> <li>Effort to achieve transparency across markets (for example, for central reporting or cross-selling beyond the local market)</li> <li>Run costs and maintenance effort for each instance</li> </ul>	<ul style="list-style-type: none"> <li>Run costs and maintenance effort for each instance</li> </ul>	<ul style="list-style-type: none"> <li>Coordination effort</li> <li>Run costs and maintenance effort for each instance</li> </ul>	<ul style="list-style-type: none"> <li>Coordination effort (for example, for the management of new releases)</li> <li>Potential lack of agility to respond quickly to specific local needs</li> <li>Higher impact in the event of failure</li> </ul>

Sources: ING; BCG.

mitigate those risks. The risks of an isolated model—a lack of transparency and the potential for choosing the wrong solution owing to a lack of knowledge—could be lessened by creating a centralized reporting process to track isolated IT systems and by allowing isolated solutions only when local IT had met specific thresholds for skills and capabilities. The risks of a coordinated model—including a high risk of errors due to heightened complexity—could be mitigated by keeping the system structure as simple as possible and clearly defining the interfaces.

### Applying the Models

ING determined that the areas most likely to benefit from a potential overhaul of their IT operating models were those that straddled country or business operations. ING grouped these into four target areas: customer domain, payments, domestic product engines, and workflow and document management. ING further determined that, to optimize results, each area would need to

employ a separate operating model at each layer of the IT stack. ING defined these layers as follows:

- ◇ *Infrastructure*, or the hardware, operating systems, storage, and networks on which the applications run and the data reside
- ◇ *Middleware*, or the technologies and solutions that bridge business and information services
- ◇ *Data model*, or the technologies and solutions necessary to create and maintain consistent and accurate master data across ING
- ◇ *Application*, or the applications that enable and support client servicing and processes such as HR and finance
- ◇ *Business process*, or mechanisms at the top of the pyramid that support interactions with clients and client servicing

Using the process outlined above—an initial recommendation per the framework, supplemented by a se-

ries of additional screens for feasibility and fit—ING identified target operating models for each of the four target areas and each layer of their respective IT stacks. (See Exhibit 3.) Replicated and shared models predominated, especially in such areas as customer information and global transaction services. Isolated and coordinated models were less common but had their specific applications—isolated models were common for domestic channels, for example, while coordinated models were common for financial reporting.

Critically, ING was able to secure the necessary buy-in for the plan from key stakeholders—including those who would be losing autonomy as a result of the changes—aided by the new decision-making framework, which was widely regarded as transparent and fair. Buy-in was facilitated by two “ground rules” that ING’s leadership imposed on itself: all decisions would truly be based on facts and common sense rather than politics, and all players would “wear their

### Exhibit 3. The Target Operating Model Varies for Each Layer of the Value Chain

Example: Target operating models for the customer domain

Customer domain	
Pyramid layer	Target operating model
Processes	Coordinated
Applications	Replicated
Data model	Shared
Middleware	Shared
Infrastructure	Shared

Sources: ING; BCG.

ING hats” during negotiations and workshops—that is, they would take a big-picture perspective rather than a local one.

A calculation of the potential synergies for ING’s run-the-bank and change-the-bank costs suggests that the financial benefits to ING of instituting these new models will be significant over time. The company’s change-the-bank costs, for example, are expected to fall materially owing to the elimination of redundant investments. Other expected benefits to ING include a more engaged IT workforce, because of a clearer understanding of how decisions are made, and better alignment between the company’s business executives and CIOs. These benefits are already starting to materialize.

The effort continues to advance. ING is mapping out detailed plans for implementation and has already defined a governance plan for the

target areas. It has instituted a technology standards board, composed of business executives and CIOs, to define, manage, and endorse standards. The technology board’s decisions are overseen by a separate standards board, led by an ING Group executive board member. The ultimate goal is to ensure that commercial standards are set at a level that guarantees a highly positive, ING-unique customer experience.

All told, ING is very encouraged by the return on the initiative to date. It plans to roll the plan out to its IT operations in other countries in the near future and expects similarly positive results.

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**W**hen it comes to ownership rights for technology choices, gray areas can quickly become problem areas—particularly when a company’s vari-

ous operations have diverging requirements. An approach similar to ING’s can remove ambiguity and, in the process, greatly improve the speed and quality of decision-making, whether in financial services or in other industries.

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