



## The Challenge of the Matrices

S.Swaminathan

Matrix n (pl. Matrices) a rectangular array of quantities or expressions in rows and columns that is **treated as a single entity and manipulated** according to particular rules.

Oxford English Dictionary tenth edition

Business Process modeling is the key feature supported by BPM vendors offering varied solutions to manage and improve Process efficiency to achieve desired Business objectives. The modeling and subsequent implementation is normally built around the established Business Process Architecture of the Business Entity. Apart from the process Model, Business operations are influenced by the Infrastructure Architecture including the IT infrastructure, IT solutions and services architecture and the Overall Strategic Business Architecture of the Business Entity.

Viewed individually each of these are governed by different set of requirements and are usually optimized in isolation at different points in time. However viewed together they are expected to provide a homogenous operating environment.

The strategic Business architecture has to define and support Core business capabilities, Business and Financial Objectives, Regulatory compliances and a minimum set of Social objectives. In practical terms these translate into strategic and operational business models and financial model that would allow the Business Entity to function and grow.

The IT infrastructure architecture is normally designed to meet the service delivery requirements and has to provide coverage for the geographic spread if necessary. The defining aspects of the infrastructure model are cost-effective resource mobilization, intra and inter unit communication, full availability across time zones and provision for technology upgrades.

The Solutions and services architecture is built up by whole range of Software Applications deployed over a period of time and most



probably in an incremental manner. The solutions architecture has to ensure availability of correct and current information flow in real-time

across all processes. In addition it has support real-time updates, trustworthy archiving and confidentiality of data and information made available in the system.

The Business Process Architecture breathes life into the other three architecture models by defining the Processes and their relationships. This represents what the Business Entity stands for and its Portfolio of products and or services. The execution of a given process architecture model involves resources internal to the Entity as well external to it. Collectively the Processes determine the identity of the Business Entity at any point in time, in the view of its service Partners, Suppliers, Customers, Government and Regulatory bodies and for that matter any other entity that interacts with it.

#### The Matrices

The above four architectural models collectively can be considered to represent all the operations entered into by the Business Entity. However in its dealings with other Business entities (each one of which of course have their own architecture models designed to meet their own operations) interfaces have to be defined. These interface definitions will determine how the interactions between the entities will be carried out. Hence they have to lay down at the minimum the following:

- Role of each Entity in business terms
- Responsibility to each other and to other partners
- Rules of interaction
- Restraints imposed
- Results expected and rewards structure
- Risk mitigation methods
- Reporting that is necessary

Consider for example the relationship between the Business Entity and say its Service Partner.

This Interface has to provide scope to define and redefine the following

Product / service portfolio that will be offered by Partner to the Business entity's Customers



Role of Business entity for pre-sale, delivery and post-sale support  
Service definitions with variations that will be on offer with lead-time guaranties etc  
Pricing mechanism agreed upon supported

Revenue collection regulations procedures  
Role of both parties for regulatory compliances  
Customer-facing processes and procedures  
Reporting structures and agreed information flow

These interfaces when deployed run across all the four architecture models, in terms functions to be supported and data and information flow to be maintained. This is true for both the Business Entity and the Service Partner. The points of interconnect will be with the processes within each of these architectures.  
Hence the information flow and the process flow of the Business Entity have to accommodate the service Partner and vice versa.

This brings up to the Matrix for the particular service Partner.

The architecture models form one dimension of this matrix and the interface requirements specific to a particular partner form the other dimension of the matrix.

The Business Entity has to define, regulate, monitor and manage a given set of Matrices to sustain its business relationships.

### The Challenge

A separate matrix is to be considered for each of the relationships the Business Entity is engaged in. These would have to cover its suppliers, Product / Service partners, OEM's, CRM Service providers, Regulatory bodies etc. As the Entity brings in more such partners and makes changes in partnerships or resorts to outsource its services, the Matrices undergo significant in their processes, both within and at the points of interconnect. This then qualifies for a Process redesign, which more often is attempted incrementally. The resulting Processes and their architecture have to overcome any shortcomings in the operation of the Entity and its Partner.



BPM solutions do support process modeling, development and translation of the model into an executable environment through a BPM engine and tools for rapid deployment as well as Process monitoring.

The challenge is hence not only of identifying the Process changes in a dynamic environment but also of managing multiple matrices, in all of which The Business Entity is a common player.

## Technology

Developments in the area of Service Oriented architecture or SOA address the technology aspects of this complex requirement. Web services have become inherent part of the solutions architecture and without them it would be impossible to provide for and manage multitude of interconnections between Applications running in disparate environments within each entity. Web services Standards provide for access to and exchange of, information and functionality, and thus enable a homogenous view for each of the partnering Entities to meet each one's operating requirements.

SOA is still evolving and at best is an enabler to ensure a certain degree of resilience is built in the interfaces in a complex web of interactions.

## Ownership

This brings up the issue of ownership. Processes are to be owned, implemented and executed by individuals and groups engaged in the various operations of the Business Entity. Any change in the process including new process definitions are to be owned by these groups at different levels in the organization structure. A logical extension of this would be the ownership of the entire Process model together with other models, as defined in the Matrix, by the Business Entity with each of its partners, and the resulting outcome of managing the relationships as defined by the matrices. Service Level Agreements attempt to reflect this by defining the desired outcome of the engagement while the Matrices address the interaction between the processes.



Managing such multiple relationships especially in an outsourced environment becomes critical to the success of the operations. One possible approach is to entrust the management of specific relationships to third party vendors who bring in experience pertaining to the processes and technology involved and takes the ownership of the process model and the accompanying matrix and commit the desired business outcome.

*S.Swaminathan is consultant with Baton Business Orchestration Services. He can be reached at [swami@batonbos.com](mailto:swami@batonbos.com)*