



BREAKTHROUGH
BUSINESS
TECHNOLOGIES

Jack Shaw

Decision Management and Intelligent Systems

Decision Management

Organizations make thousands decisions every day. Some of these decisions are automated – often poorly. Most are made with little training, little background, and all too often, little thought. But customers consider that ALL of these decisions are made deliberately with a full understanding of the business’s policies and strategies. Every decision reflects on the company, but few, if any, are managed.

Decision Management (DM) is a systematic approach to automate and improve decisions across the enterprise. It allows businesses to consistently make better and more profitable decisions while enabling business to adapt to changing conditions in real time.

Managing decisions effectively on an enterprise basis means that the vast majority of decisions – routine, low-level, operational decisions must be automated. Doing so will ensure that decisions are made more accurately, more consistently, faster, at lower cost, and in accordance with company policies and strategies. Organizations that can automate good decisions will have a powerful competitive advantage in our increasingly complex, dynamically changing world.

But conventional information technologies and architectures cannot effectively automate decisions. So called “Business Intelligence (BI)” is essentially an after the fact reporting tool. Traditional ERP systems focus on transaction processing not the decisions needed to manage those transactions. And such tools as Business Process Management (BPM) and Service Oriented Architectures (SOA), while beneficial, have no coherent focus on managing decisions.

Effectively automating operational decisions and therefore managing decisions on an enterprise basis requires intelligent systems. The necessary technologies have actually been evolving for many years. But until the advent of the Internet and the glut of information that has now become available, all of which customers expect businesses to respond to, these requisite technologies were underutilized. Now, as the demand for Decision Management grows, so does the need for its enabling intelligent systems technologies.

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Example 1: Production Scheduling

Many manufacturers have integrated their supply side using EDI and e-Commerce. Some of the same companies have integrated demand forecasting very well.

Traditional ERP software companies like their clients to think that all that is needed for manufacturers who've done the above is to connect their internal systems, lean back, put their feet up, and let the money roll in.

But, of course, this doesn't work. There are too many "intangibles" to fully automate decisions on short-term production scheduling, deployment of finished goods inventory, etc. Instead, these companies hire production schedulers to consider the many factors not addressed by conventional ERP software in making these decisions.

But production schedulers typically have time for only a few of the most important products. The "B" and "C" products incur stockouts or excess inventories. For those products that productions schedulers do address, the approach may not be consistent from one person to another.

By adding intelligence to conventional ERP, manufacturers can augment the capabilities of production schedulers – extending their reasoning processes across all products and ensuring that all their schedulers have the decision management help needed to ensure sound decision consistent with company policies and

Intelligent Systems Technologies

Imagine business technology beyond today's transaction processing and conventional decision support, beyond the after the fact analyses provided by traditional business intelligence – technology that not only anticipates problems but presents solutions. Imagine business technology that control costs *before* they happen. Imagine business technology that increases the productivity of key staff by not just 20% or 30% but two or three *times* or more. This is 21st century business technology. It is under development right now and is entering the market as you read these words.

These new applications use a range of intelligent technologies up to and including software that can think – that can *reason* about information in ways very similar to how expert business professionals reason about similar information.

The key enabling technologies have been developed and tested for years in numerous domains; they are now entering business. Executives in every business must plan for how and where they will use intelligent systems technologies to automate and manage mission critical decisions across the enterprise.

Support for Business Professionals – Not Replacements

Intelligent systems will never replace business professionals. However, these systems will dramatically increase the productivity of knowledge workers – who will continue to be in short supply for the foreseeable future. Applications of these technologies in other domains have demonstrated increases in personnel productivity by up to fifty (50) times. Even an increase of 50% would change the rules of the game in your business.

Decision Management and its enabling intelligent systems technologies, properly integrated with traditional IT infrastructure, will improve quality, reduce costs, and allow business to respond much more quickly to the demands of their customers. Intelligent systems are already being implemented in fields as diverse as risk management, production scheduling, fraud control, complex product configuration, travel planning, and supply chain management.

Help With Decision Management and Intelligent Systems Technologies

Jack Shaw aids technology product and services providers by showing them how appropriate intelligent systems technologies will help their solutions meet the rapidly evolving needs of the business market and provide them with significant strategic advantage over their slower-moving competitors. He also helps end-user businesses understand these technologies, identify the products and services that will enable them to gain the advantages of DM and intelligent systems, and plan for the successful acquisition and implementation of these new tools.

Examples of these technologies and some of their general applications in enabling Decision Management are listed at the end of this paper. These tools, and the DM systems and processes which leverage them, will change business more in the next few years than the Internet and the World Wide Web have since their inception.

So call Jack Shaw today at 770-910-5969 to schedule a free 30 minute consultation and learn how an Decision Management Opportunity Assessment can help your organization incorporate the intelligent systems capabilities you'll need to have in your systems to survive and compete in the rapidly changing business environment of the 21st Century.

Decision Management Opportunity Assessment for IT Companies

- Evaluation of Market Need for DM/Intelligent Systems Solutions
 - Analysis of Market Needs
 - Meetings with Clients, Channel Partners
- Development of Decision Inventory
 - Decision Management within Relevant Business Processes
 - Decision Management within Scope of Product or Solution
- Determination of DM/Intelligent Systems Functionality for Product or Solution
 - Review of Current Product / Solution Functionality
 - Review of Current Product / Solution Roadmap
- Preliminary Design of Intelligent Product or Solution
 - Within overall Decision Management environment
 - Specific Requirements for Product / Solution
- Identification of Appropriate Intelligent Systems Technologies
 - Suitability, Value for Application
 - Cost, Complexity for Implementation
- Intelligent Systems Technology Vendor Assessment
- Marketing Communications Strategy for DM/Intelligent Systems Solutions
 - Value Added
 - Product / Solutions Differentiation

Example 2: The Full Reimbursement

When Dr. Jones schedules Mr. Brown for surgery, the Intelligent Financial Management System (IFMS) uses Mr. Brown's insurance information to immediately verify required referrals, coverage, and co-pay.

The IFMS also checks the history of similar procedure claims filed with the same payor, and notes a recent pattern of substantial deductions unless specific diagnostic steps, not normally performed, are completed prior to surgery.

It notifies Dr. Jones and schedules the additional tests to be done. As a result, Mr. Brown is fully covered for his surgery while both Dr. Jones and the medical center are fully reimbursed.

Background on Jack Shaw

- Over three decades of senior level strategic marketing and product management experience in IT product and service companies.
- An expert on Intelligent Systems – spent four years as VP, Commercial Systems, for leading providers of advanced intelligent systems technologies and constraint-based configuration software.
- Experienced software executive and business leader
– keen understanding of the fundamentals of success in the software business
- Visionary product marketing and development strategist
– able to gain the confidence of C-level executives and industry analysts.
- Has earned a strong global reputation as a visionary technology strategist having written three books on the subject and delivered over 1000 paid speaking engagements in more than 20 countries around the world.
- Gifted speaker, motivator, and published author – delivered keynote and featured addresses at numerous conferences hosted by IBM, Oracle, SAP, Gartner, and Forrester.
- Successful CEO of own consulting business for over 15 years.
- Holds a Bachelor’s degree from Yale and an MBA in finance and marketing from the Kellogg Graduate School of Management at Northwestern University.

DM/Intelligent Systems Technologies

□ Technologies

- **Analytical Techniques**
 - Bayesian Belief Networks
 - Concept Node Graphs
 - Ontologies/Taxonomies
- **Planning Methodologies**
 - Case-based Reasoning
 - Constraint Programming
 - Heuristic Reasoning
 - Plan Goal Graphs
 - Rules-based Systems

□ General Applications

- Data Mining
- Intelligent Search
- Machine Learning
- Natural Language Processing
- Pattern Recognition
- Predictive Analytics
- Least Commitment Planning