**Agentic Business Operating System**

**In the Agentic Business Operating System (ABOS), AI agents leverage existing ERP, CRM, MES, B2B portal, financial accounting software, secure payment gateway, public website and social media, supply chain management software, and government portals for statutory compliances and regulatory filings through a Resource Allocation Gateway (RAG) to streamline and optimize business operations. AI agents will also download the latest business strategy and business process performance updates for continuous improvement and alignment with organizational goals.**

**Executive Layer Agents**

**1. Business Kernel The Business Kernel implements the core functionality that everything else in the business depends upon. It provides basic low-level operations such as scheduling tasks or routing business processes. The Business Kernel is the heart of the organization and all tasks it performs must be fast and simple. It manages organizational resources and facilitates communication between various departments and systems through the RAG.**

**2. Task and Workflow Manager The Task and Workflow Manager handles the creation, scheduling, and termination of business tasks and workflows. A task is a specific piece of work assigned to an agent or team, while a workflow is a series of tasks that must be completed in a particular order. The Task and Workflow Manager is responsible for the execution of all tasks within a workflow, ensuring they run smoothly and efficiently. It also manages synchronization, a technique that ensures tasks from different workflows do not access the same resources simultaneously, thus preventing conflicts and ensuring data integrity. Additionally, it determines which tasks run at any given time, optimizing resource usage through the RAG.**

**3. Resource Manager The Resource Manager manages organizational resources by performing several major tasks. It handles the allocation and deallocation of resources dynamically, ensuring that each department has enough resources to function correctly and efficiently. It also supports the concepts of shared resources, resource pooling, and on-demand resource provisioning, which are essential for optimizing resource usage and enabling different departments to share resources without duplicating them. The Resource Manager utilizes existing ERP and MES modules via the RAG.**

**4. Security and Compliance Monitor Enforces access control policies for the business, ensuring that only authorized agents and departments can access protected resources, thereby maintaining business security and compliance. This is achieved through mechanisms like access control lists (ACLs), which specify the permissions granted to each agent or department for accessing specific resources. The Security and Compliance Monitor also implements mechanisms to protect business resources from unauthorized access and to ensure compliance with regulatory requirements, leveraging ERP, CRM, MES, B2B portal, and government portal modules through the RAG. Additionally, it manages decision-making with reference to security aspects against the delegation of powers for various business resources, including IT resources, financial resources, human resources, and other critical resources.**

**5. Communication and Collaboration Manager Provides mechanisms for agents and departments to communicate and synchronize their actions. This includes managing email, instant messaging, video conferencing, and collaborative platforms to facilitate effective communication and collaboration within the organization. The Communication and Collaboration Manager integrates with ERP, CRM, and B2B portal communication tools via the RAG.**

**6. Network and Connectivity Manager Manages network connections and protocols. It includes the networking stack, which is a set of network protocol layers that work together to handle all aspects of business communication, from physical transmission to application-level data exchange. The Network and Connectivity Manager interfaces with ERP, CRM, MES, and B2B portal networking modules via the RAG.**

**7. Supply Chain, Inventory, and Delivery Manager Manages the communication between business applications and the interfaces provided by inventory systems, ERP packages, MES modules, B2B portals, and supply chain management software. This includes managing databases, which provide mechanisms for creating, deleting, reading, writing, and managing inventory. ERP and MES packages provide the software connection between business processes and inventory. Because business operations and inventory systems operate at different speeds, the communication between the business processes and inventory systems is primarily done through inventory request packets. This manager leverages the RAG to interface with ERP, MES, and supply chain management software modules.**

**8. Object Manager Manages objects in the business system. Projects, contracts, documents, and other business resources are all represented as objects. The Object Manager ensures these objects are created, manipulated, and accessed efficiently, utilizing ERP and MES modules through the RAG.**

**9. Configuration Manager Manages business configurations and settings. It stores persistent information about the business processes and applications, ensuring that business settings and application data are maintained consistently across sessions. The Configuration Manager integrates with ERP and MES modules via the RAG to maintain configurations.**

**10. Transaction Manager Manages business transactions, ensuring that operations are completed in an all-or-nothing manner. When dealing with multiple actions on one or more inventory sources, and the operations must all atomically succeed or fail to preserve the integrity of the inventory, you might want to group the operations together as a single transaction. If all the operations within the transaction succeed, the transaction can be committed so that all the changes persist as an atomic unit. If a failure occurs, the transaction can be rolled back so that the inventory sources are restored to their original state. The Transaction Manager leverages ERP, CRM, MES, and B2B portal modules through the RAG.**

**11. Financial Accounting Manager Utilizes existing financial accounting software to handle financial transactions, ensuring accurate and compliant financial reporting. It integrates financial data from various sources and provides real-time financial insights. The Financial Accounting Manager leverages financial accounting software through the RAG.**

**12. Secure Payment Gateway Manager Manages secure payment gateways, ensuring that transactions are processed safely and efficiently. This includes handling payment authorization, transaction processing, and secure data transmission. The Secure Payment Gateway Manager leverages secure payment gateway modules through the RAG.**

**13. Public Websites and Social Media Manager Manages public websites and social media handles, ensuring that online presence is maintained and interactions are handled effectively. This includes posting updates, managing content, and engaging with the audience. The Public Websites and Social Media Manager leverages public website and social media modules through the RAG.**

**14. Government Compliance and Regulatory Filing Manager Interfaces with various government portals for statutory compliances and regulatory filings, ensuring that the business meets all legal and regulatory requirements. This includes submitting forms, making necessary filings, and maintaining compliance records. The Government Compliance and Regulatory Filing Manager leverages government portal modules through the RAG.**

**15. Supply Chain Management Manager Utilizes existing supply chain management software to oversee and optimize the flow of goods, information, and finances across the supply chain network. This includes coordinating with suppliers, managing logistics, and ensuring timely delivery of products. The Supply Chain Management Manager leverages supply chain management software through the RAG.**

**16. Business Strategy and Performance Manager Downloads the latest business strategy and business process performance updates, ensuring that the ABOS is aligned with organizational goals and continuously improving. This includes gathering performance metrics, analyzing data, and updating strategies accordingly.**

**17. Business Strategic Management Agent Focuses on long-term planning and strategic decision-making. It analyzes market trends, competitive landscape, and internal performance data to provide insights and recommendations for future business directions. This agent ensures that the organization remains agile and proactive in a dynamic business environment.**

**18. Marketing Intelligence Manager Identifies and taps into the express and latent needs of customers. This agent analyzes customer behavior, preferences, and feedback to uncover insights and opportunities. It uses advanced data analytics and machine learning techniques to predict customer needs and preferences, enabling the business to offer personalized products and services that meet customer demands effectively.**

**19. Research and Development (R&D) Manager Manages in-house and collaborative research and development efforts. This agent facilitates innovation by coordinating R&D projects, collaborating with external partners, and integrating new technologies and methodologies into business processes. The R&D Manager leverages data from various sources to drive research initiatives and ensure the organization remains at the forefront of industry advancements.**

**20. Interface Agents Specialized programs that enable the BOS to communicate with external systems and devices like printers, projectors, and network hardware. They act as intermediaries between the BOS and the physical hardware, integrating with ERP, CRM, MES, B2B portal, financial accounting, secure payment gateway, public website and social media, supply chain management, and government portal modules via the RAG.**

**User Mode Agents**

**1. User Interface Agents Provide interfaces (CLI or GUI) for agents to interact with the business system. This includes the Shell and Command Interpreter, which provides a command-line interface for agents to execute commands and run scripts. Examples include dashboards and control panels. The User Interface Agents allow agents to run applications, manage files, and perform other tasks, interfacing with ERP, CRM, MES, B2B portal, financial accounting, secure payment gateway, public website and social media, supply chain management, and government portal modules through the RAG.**

**2. Services / Daemons Background processes that perform various business-related tasks. Examples include managing print jobs, handling scheduled tasks, and facilitating network services, utilizing ERP, CRM, MES, B2B portal, financial accounting, secure payment gateway, public website and social media, supply chain management, and government portal modules via the RAG.**

**3. Environment Subsystems Provide runtime environments for applications from different business domains. These subsystems allow the BOS to support applications written for various business functions, ensuring compatibility and seamless execution, integrating with ERP, CRM, MES, B2B portal, financial accounting, secure payment gateway, public website and social media, supply chain management, and government portal modules through the RAG.**

**4. Business Applications Software applications designed to perform specific tasks for agents, such as CRM (Customer Relationship Management), financial management, and project management. These programs interact with the BOS to access business resources, utilizing ERP**