

# Defining MMIS Modularity

A common approach for successful implementations



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## Defining modularity will be the key to implementing it successfully.

Modularity: states and vendors alike are curious about it and it's generating a great deal of curiosity. It is also among the least understood concepts in the MMIS market today – and that could impact program management and costs in the near future. To see why, it's important to first understand what we know about modularity.

### Reasons for Modularity

The Centers for Medicaid and Medicare Services (CMS) is encouraging states to adopt systems with modular components. This includes combining new products, open source code and commercial off the shelf (COTS) products, as well as sharing services across states and programs where appropriate.

It's easy to see why. Many older Medicaid management systems are “monolithic”; being hard-coded and customized, they have numerous interdependencies that require a complete system rebuild to change a single functional area. Modular systems allow one area to be upgraded independently without affecting the others. This approach aligns with CMS' standards and conditions and brings states closer to their vision of quicker implementation timelines, flexible and configurable systems and greater interoperability – not to mention reduced implementation and operational costs.

### What is a module?

Greater efficiency and lower costs are great goals for any program, but there are growing concerns about the move to modularity. Why? Currently, there is no common definition of what modularity is; instead, each state can define modules based on the business processes that are specific to its goals and needs. This leaves the concept of modularity open to a great deal of interpretation and variation. Some states are interpreting it from the perspective of infrastructure and framework; others see it as a procurement and sourcing strategy; and still others have an application capability and business process point of view.

This is a problem because the differing modularity definitions could result in one-off modular solutions whose components are not interchangeable with other modular solutions. Instead of integral advances of modular solutions that encourage development of lower-cost, standardized solutions, states will continue to procure – and vendors will continue to develop – solutions unique to each state. This approach goes against MITA principles of more efficient solutions and interoperability between systems.

### Modular, but Unique

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### Varying module definition from state to state.

This can result in module developers creating one-off solutions for each customer, increasing cost and risk. These modules and solutions aren't likely to be redeployed in another state.

It's important that states be able to combine disparate modules and services to support their evolving business needs through an evolving, connected ecosystem.



#### Infrastructure components and portals viewed as modules.

Some states require vendors to use specific infrastructure components in areas such as security or privacy, enterprise service bus, rules engines, or others. While this could help a state to leverage existing components, such a strategy could impact all vendors not using the specified component. They would need to de-couple any existing code base from the component they currently use and create new interfaces for the state-specified infrastructure component.

Similarly, if vendors are required to develop new portals for existing modules, the development costs for their now-unused portals will likely be passed to existing or future customers – not to mention the additional costs of recreating all of the portals. In both cases, would significantly increase the development and deployment cost and risk of the overall solution.

#### Lack of Application Programming Interface (API) standards.

Modularity in the Medicaid environment can only be done successfully with integrated and well-connected systems using APIs. There needs to be a defined API standard that all vendors adhere to and expose for real-time/batch data connectivity. This standard would be governed by CMS, HSS, ONC or another organization. This is similar to how EDI/X12 standards are governed.

Without API standards, there is the potential to revert to outdated approaches in which modules were standalone. This would result in a dysfunctional systems or modules unable to interoperate in a vendor-agnostic implementation, leading to increased state-specific solutions and higher implementation costs for each iteration of a unique modular solution.

#### Lack of service level agreement (SLA) definitions.

Systems frequently produce transactions spanning multiple modules. If these modules are from different vendors, a lack of common SLA definitions will make SLA enforcement more difficult as there will be cross-vendor distributions of responsibilities and penalties.

### Defining a Common Approach

The fundamental principle of modular design is to organize a complex system as a set of distinct components that can be developed independently and then plugged together. Although appears to be a simple idea, its effectiveness depends on how systems are divided into components and the mechanisms used to plug components together. It's important that states be able to combine disparate modules and services to support their evolving business needs – not through prescriptive, rigid, previously defined business processes, but through an evolving, connected ecosystem of secure data exchanges and adaptable, rules-driven capabilities.

Collaboration between governing bodies such as CMS, states and the vendor community could create such an environment. By establishing a definition of modularity and standards for sharing information and interfaces, the market will have the framework it needs to create truly modular systems that avoid the pitfalls listed above and the risks and costs they generate. Of course, the big question is where to start.

The key could be through MITA, whose guidelines provide a list of common business areas. Because CMS has indicated that states should define modules based on the business processes they need to support, it makes sense to see what business processes are used by all states and back out the definitions from there. That is, modules can be defined by core functions that Medicaid programs require to operate. These could include:

- Claims Administration (Member, Medical Claims, Reference, Financial, Service Authorization)
- Pharmacy Claims Processing
- Electronic Data Interchange
- Data Analytics
- Care Management
- Fraud, Waste, and Abuse (includes SURS or MECT Program Integrity requirements)
- Electronic Data Management System
- Provider Data Management (includes enrollment and credentialing)

These functional areas have fairly standard definitions today and are currently available and undergoing improvements from the vendor community. Modules developed along these lines would offer wide support from the start and be built on sharable and reusable technology. (It's why Conduent offers modules closely aligned with business processes common to each Medicaid program and require minimal configuration while offering maximum interoperability.) In addition to lowering development costs and implementation risks, the improved interchangeability of such modules would lead to more competition between vendors, leading to continuing product refinements and lower overall costs for states.

## Working Toward Standardization

States are wrestling with whether their approaches to modularity will yield the results they want. As with any industry change, states cannot afford to react. With so many challenges that could impact procurements and implementations, each state must be proactive in defining its approach. But that doesn't mean they should do so in a vacuum.

For modularity to be successful, the market must become more defined. As they review their current environments to define the modules required to support their business processes, we recommend that states communicate with stakeholders nationwide and develop a common approach to modularity. Doing so will benefit them not only from cost standpoint; it will also lead to improved overall systems – which is key for managing the health of a growing and expanding Medicaid population.

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