



IFX Forum, Inc.

## IFX Framework Datasheet

Financial service providers and associated technology vendors evaluating the strength of any given XML-based communication standard need to take into consideration the underlying qualities that make that standard a technology worthy of investment.

The issue is not solely whether or not the given specification can handle a single set of transactions or whether it captures a unique piece of data, but also the manner in which these issues are handled. How easy is the standard to understand? How strong is the specification in its ability to meet current business needs while also leaving room for evolution? How are customizations handled while still maintaining the strict rules needed for universal compliance? How can new lines of business be integrated with the technology?

The Interactive Financial eXchange (IFX) specification is built with the recognition that no single financial transaction stands on its own, but rather is an integral part of an relationship among all of the communicating parties; a payment is not complete until a remittance is sent, an ATM withdrawal is not complete until a consumer's account has been debited, and so forth. Additionally, the nature of the conversation may need to be modified and grown to fit into changing environments.

### Foundation for Interoperability

At the foundation of the Interactive Financial eXchange (IFX) specification is its unique framework, which defines not only how all of the financial messages are communicated among parties, but also how they relate to each other. Built on solid, time-tested design principles and developed by industry leaders representing years of experience in the financial services industry, the

IFX Framework was built strong from the ground up.

The IFX Framework allows for customization and extensibility while adhering to strict implementation guidelines needed for large-scale interoperability. IFX is built with the recognition that not every single nuance of the financial conversation will be captured perfectly by the objects that have been defined. The rich set of IFX Business Objects provided can be used as a great starting point, however; the IFX Framework allows for easy customizations that will maintain compatibility with other IFX implementations if applied in accordance with the Framework.

The IFX Framework was not custom-built to fit into any one environment, but rather was designed with the flexibility to fit into all environments. It was not built to suit only one type of application but rather was designed to facilitate many kinds of financial conversations among disparate sources.

### Unifying Common Object Definition

In addition to the IFX Framework, the foundation of the IFX Specification includes a set of common objects that can be used across multiple types of financial services. This facilitates the implementation of cross-service applications.

For example, with a common definition for a "customer" that is used across both Payment and Bill Presentment services, multiple types of applications can leverage off of one standard to utilize that piece of data. A financial institution that

wishes to offer multiple services that may be located in different business units can take advantage of the common object definition to unify the disparate systems.

### IFX Methodology for Adding and Extending

The IFX Framework has been designed so that whole new areas of financial conversation can be incorporated using the IFX Methodology, in a manner that is compatible with the ones that have been previously defined. The IFX Methodology is designed to facilitate rapid innovation in the evolution of the specification while still maintaining strict controls necessary for a universally-compatible standard.

The IFX Methodology is designed to leverage off of the Common Object Definition and the IFX Framework in order to rapidly translate real-world business use cases into usable IFX objects.

The first step is to examine the rich objects that already exist in IFX and decide which of them are applicable either as already defined or expanded for the purposes of the new functionality that is to be implemented.

Secondly, the additional functionality that is not already captured in the existing body of work is modeled against the architectural rules, taking into account both data captured and processing rules. The

amount of work that has been invested into the specification to date facilitates this step.

The third step is to define any new objects and associated methods that may be needed and how they will fit in with what is already there.

Finally, running real life use cases through the new, modified and existing objects serve to validate the new functionality.

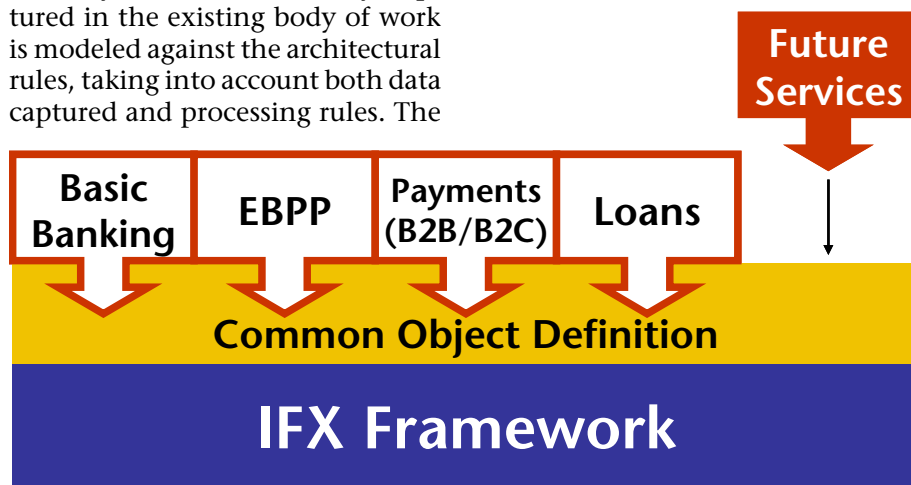
### Who is IFX?

IFX is governed by the IFX Forum and has been in the making for over four years, mature by today's standards.

The IFX Forum, a non-profit organization that is open for worldwide participation, was founded to provide leadership, structure, and process for the development, promotion, use and adoption of the IFX Specification.

The IFX Forum is made up of a wide range of financial industry players that includes leading global banks, financial service providers and technology vendors.

For more information, please visit us at [www.IFXForum.org](http://www.IFXForum.org).



## IFX Framework Features and Benefits

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### Easy to Understand

Consistently applied set of architectural rules (naming, data formats, usage guidelines, hierarchy, and object definitions) and standardized syntax make the IFX Specification a readable document.

This significantly lowers the learning curve in understanding IFX and subsequently speeds up implementation.

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### Highly Extensible

IFX Methodology allows for addition of services, messages, and objects in a “plug-and-play” manner.

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### Highly Customizable

IFX allows for implementation of the most complex business requirements while maintaining strict requirements for global compatibility.

The IFX Framework allows for flexible expression of data within the architecture. Some examples include the support for complex amount due or extensive customer profile.

Additionally, the IFX Framework defines the implementation of a rich set of standard methods. Add, Delete, Modify, Inquiry, Audit, Synchronize methods support strict processing rules, while allowing for flexible business rules.

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### Scalable Transaction Support

The IFX flow control feature allows for very large, data-intensive complex transactions to be communicated with greater reliability. This allows for scalable performance of the system as the number of transactions grows.

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### Multiple Processing Options

IFX is designed to allow users to conduct business in a manner appropriate to their environment and does not dictate how the processing must be accomplished.

The design of request and response messages in IFX allows either batch or interactive modes of communication.

Additionally, IFX provides for applying a single authentication context to multiple requests in order to eliminate the overhead of repeated user authentication.

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<b>International Support</b>	IFX is designed to supply financial services throughout the world. It supports multiple currencies, country-specific extensions, and different forms of encoding such as UNI-CODE.
<b>Transport Independence</b>	IFX is independent of the data communication protocol used to transport the messages between the client and server computers.
<b>Multiple Front-End Application Support</b>	IFX supports a broad range of front-end applications, including Web-based applications, covering all types of financial activities running on all types of platforms.
<b>Multiple Client Support</b>	The use of data synchronization to support multiple clients is a key innovation in IFX that allows for multiple clients to access the same transactions while maintaining data integrity.
<b>Guaranteed Backward Compatibility</b>	Backward compatibility within a revision family (all 1.x compatible, all 2.x compatible to each other) minimizes long-term technology investment and maximizes long-term value of current investment.
<b>Universal Connectivity</b>	<p>One of the basic design principles of the IFX Framework is the recognition that everyone who follows the spec will be able to connect to every one else who also follows the spec.</p> <p>Universal connectivity is designed to eliminate any application specific customizations so that implementation of the standard is uniform throughout.</p>
<b>Reliability</b>	<p>Assuring users that transactions are executed and information is correct is crucial. IFX provides robust protocols for error recovery such as mandatory DTD validation and In-band negotiations.</p> <p>Mandatory DTD validation guarantees the integrity of the data before it is transported.</p> <p>In-band negotiation results in less error messages and bounced requests.</p>
<b>Built in Security Features</b>	IFX is designed with security in mind. IFX Security encompasses authentication of the parties involved, as well as secrecy and integrity of the information being exchanged. IFX is also security model independent.