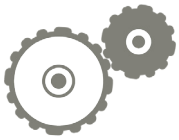
Fujitsu DXP:
Digital Transformation Platform

shaping tomorrow with you

A platform of solution building capabilities that:

Shortens development time



Increases reach of functionality

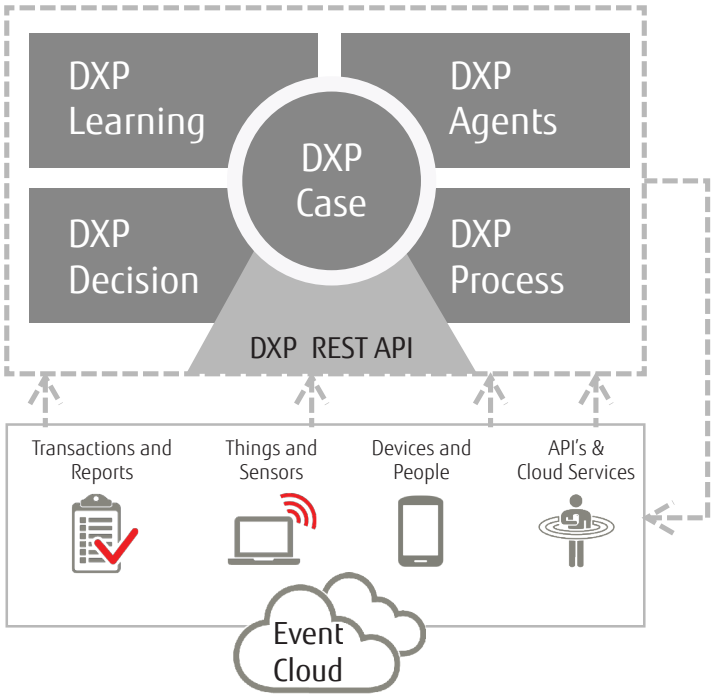
Enables unprecedented process flexibility

Fujitsu DXP brings together, in one place, all the capabilities of case management, business process management, business rules and decision management, analytics, asynchronous agents, and a whole host of other capabilities needed to make a modern enterprise solution for transforming your organization.

Business Process Management (BPM) platforms of recent years have been focused on optimizing fixed, predefined workflows with the goal of reducing cost, increasing performance, reducing errors and increasing throughput of existing predefined business processes. This has become commonly available in recent years, and many of the predefined processes in organizations have been largely automated to a reasonable extent.

Today breathes new life into process platforms which can go beyond predefined processes, and can support ad-hoc and define-as-you-go processes needed by knowledge workers. These new approaches allow building solutions that go beyond increasing the speed of interaction with customers. They can now extend to radically altering the way that organizations interact with their customers. Innovative approaches cut complete steps out of processes, unify multiple channels of interaction into one and yield higher levels of satisfaction from customers than just automating routine processes.

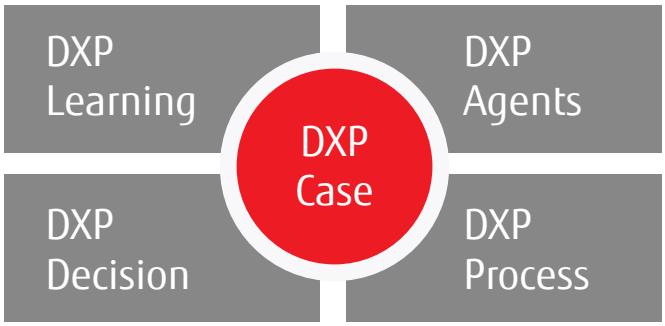
Components



Digital transformation is delivered through the combination of five main capability areas: case management, business process management, decision management, automated agents and analytics/learning.

This platform exists to interact with enterprise web environments. It sends events to all manner of devices, things and people. It can make calls out to web services, cloud services and other Application Program Interfaces (APIs). Those external programs can make calls into DXP through a set of consistent JavaScript® Object Notation (JSON) and Representational State Transfer (REST) APIs. Finally, there are any number of transactions and reports that can be produced to aid in the administration and management of not just the system, but the entire enterprise.

Case Management



The entire platform is centered on the case management function which provides all the capabilities to support a knowledge worker who determines what to do after the case has been started.

This is a powerful core that consists of a folder that can store anything, from documents, data records and files to whatever you need to associate with the case once it is started. As the knowledge worker moves forward in whatever way the case demands, the supporting information can always be aggregated in this one folder. The underlying capability is based on the powerful open source Alfresco document management system, which not only stores the document, but offers capabilities to convert documents to other formats and allows full text search of the all the data.

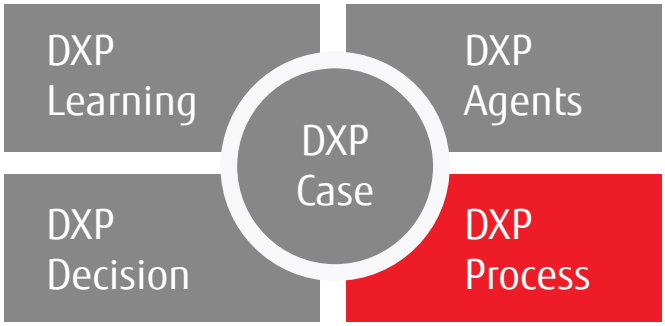
Storing the data is only part of the job. In mission critical-case management, the knowledge worker needs to be able to accurately control access to the information, without getting bogged down with setting detailed rights on every artifact. Powerful role-based access control is needed that is integrated directly with the tasking system, so that when the knowledge worker assigns a task to someone, they can

automatically gain the right access to the supporting materials in a single action.

A case folder spans many processes. With a given case, the knowledge worker can use multiple business process applications, and can have any number of business process instances in the case as needed. The case worker is driving the case forward, by bringing to bear many instances of predefined, useful business processes as needed.

Case actions and process actions are seamlessly blended together in a single environment that allows for continuous improvement of all enterprise activities.

Business Process



Business Process Management technology is a relatively mature branch of technology that allows for the automation of complex processes, the progress tracking of instances of those processes, the alerting about special conditions and interacting with other people in a predefined way.

Here you can make use of routine business processes defined in Business Process Modeling Notation BPMN. Applications can be defined to reach out to the Enterprise Service Bus (ESB) and interact with other enterprise applications to integrate the work of the knowledge worker into the environment.

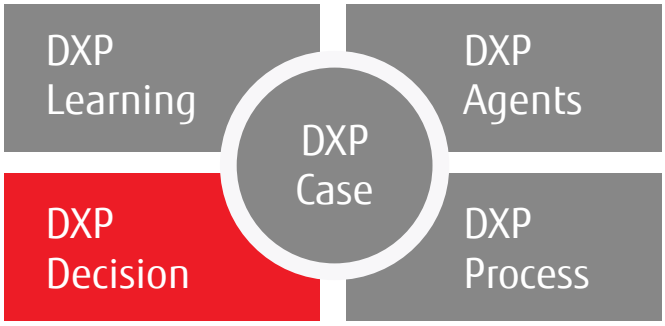
Within the well-defined fixed processes, the knowledge worker is able to add dynamic tasks and dynamic sub-processes to the process while it is running, to include changing the flow of the process if the correct access privileges are given.

There is an unlimited number of timers that are automatically started together with any action, so that if any deadline is to appear, you can have multiple warnings or other automated actions before passing the deadline.

Each process becomes a conversation thread, with built-in commenting, discussion topics and real-time chat capability.

Processes can be very long running, lasting months or even years. During that time, the original process may change, therefore you can run multiple versions of the process at the same time, and you have control over migration of existing running instances to a new process if desired. The engine is designed to handle millions of business processes, all running at the same time.

Decision Management



Fujitsu DXP includes a full business rules capability to guide the knowledge worker in immediate evaluation of the current situation, and to guide and recommend courses of action.

Many applications start with the easy-to-use decision tables which isolate the rules that an application needs from the program logic into a table that is easy for a non-programmer to adjust as needed. This allows rules to be changed rapidly, even on a daily basis, without requiring the overhead of a complete application release for every rule change.

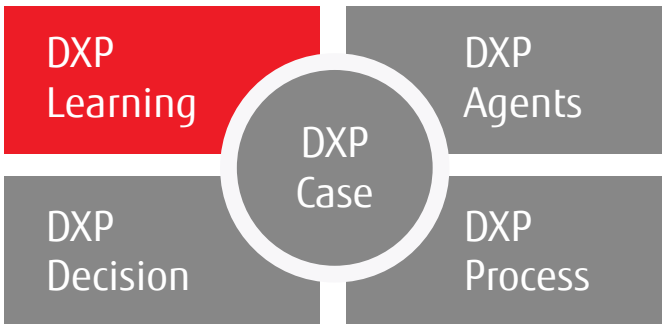
Moving beyond decision tables you can advance to the complete graphically modeled decision models, which allow complex business logic to be expressed in a non-programmatic way. The new Decision Model & Notation (DMN) standard is still evolving but promises to be a powerful new standard in the space.

Business rules can be accessed remotely, from one application to another, from one server to another. This allows an enterprise to consolidate particular kinds of rules and manage them centrally and still allow many applications to use them.

The management of business rules can be automated, by scheduling that certain rules take effect at certain times by automatically installing them at that moment. Fujitsu DXP includes capabilities to help the system administrators know which rules are being used and which rule changes would impact which application.

Decisions have now become a complete capability outside of the process, and the rules are available directly to the user interface for instant access and real time rule result display.

Analytics and Learning



Fujitsu DXP includes built-in advanced analytics to automatically discover what any part of an organization is doing and uses metrics to improve performance of the enterprise. Key performance indicators (KPIs) can be defined and monitored in real-time.

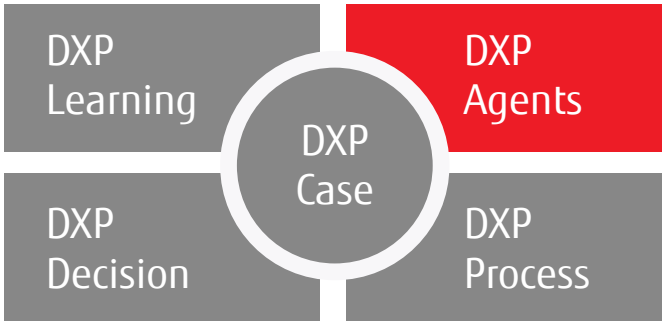
The analytics capability leverages the open source Elastic Search for a high performance scalable data warehouse and open source Kibana® for a flexible, powerful dashboard to gain insights into the results that have been collected.

You can set thresholds on the KPI values, and be alerted when the threshold is passed. You can even set automated responses to act on these changes in the KPI values.

The machine learning capability can be used to discover patterns over time. It can learn the organization's "normal" mode of operation, and then automatically detect differences in the pattern, and alert the right people to see what is wrong.

Fujitsu exclusive Automated Process Discovery (APD) is included to allow the historical events to be mined in order to determine the actual processes (sometimes called dark processes) that exist in the organization. Whether planned or unplanned, the APD capability can give you the hard metrics you need to improve an organization's processes.

Agents & Robots



Fujitsu DXP includes automation capabilities that are outside of scripted processes and can be used for asynchronous activities.

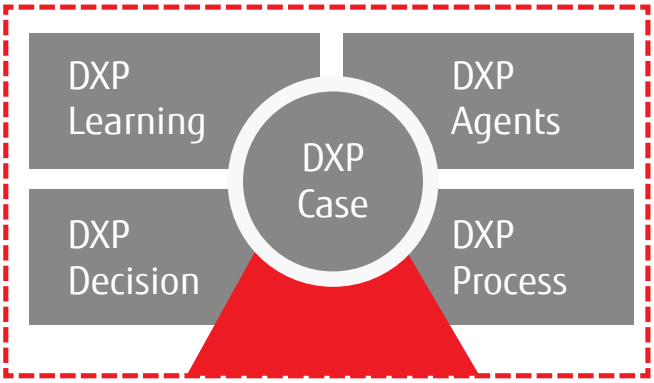
Case agents work outside of the business process to coordinate data and actions across multiple separate process instances. Case agents work in the background, to perform repetitive monitoring operations, like automated task delegation in response to vacation schedules, or resource balancing within a team across all the processes that the team has at the moment. Background activities like daily digest and worklist notifications can be automated using case agents.

Listeners can be configured to pick up events from any number of sources, and pass those events on to the process engine for processing.

Cognitive capability and chat-bot interfaces allow for a conversational approach to business process handling. This allows the knowledge worker to easily interact with experts within and outside of their organization through text interfaces and to include them in the work on the case.

Robotic process automation (RPA) provides a powerful way to access legacy applications as if the robot was a user, and to operate that user interface in order to enter or extract information needed for the process.

Bringing it all Together



All of this has been assembled to work together as a single unified platform for creating and deploying enterprise solutions. Fujitsu DXP can be run in several different cloud environments, including Amazon® AWS, Microsoft® Azure®, Fujitsu Cloud Service S5®, and Fujitsu K5®. You can also run this in your own data center anywhere that JBoss® and Postgres™ DB will run – including laptops and mobile devises.

The engine is even compact enough to be embedded in OEM solutions if desired.

Typically, an application will be deployed on a single High Availability server (clustered) but you have the option to deploy an application into a forest of micro servers. Everything is accessed through a single, complete JSON REST API, which makes it easy to develop modern HTML5 user interfaces which can be fully interactive as well as responsive to the device configuration.

Applications are packaged into transportable BAR files, which can be installed manually, or automatically on a schedule, directly from an application repository. This makes it easy to manage the deployment of applications as a continuous operation in the enterprise. True agile development.

The framework offers single sign-on (SSO) capability so that users can safely and seamlessly use a forest of servers without requiring everything to be behind a firewall.

Fujitsu DXP will simplify the task of developing solutions that transform the enterprise. It has the capabilities you need to empower knowledge workers to collect and manage the information they need to get work done, and to communicate the results to others.

It is all brought together and supported by the award winning Fujitsu global enterprise software support team who are available any time to help you get solutions developed and deployed quickly. Isn't it time to leave the legacy approaches behind, and move up to an integrated platform for digital transformation?

Standards Supported

- **HTML5** – The latest version of HTML opens up how the document object model works in a powerful standard way allowing for asynchronous interaction with the server through JSON and REST APIs. Agile Adapter is useful to any HTML5 application whether you use AngularJS or not.
- **JSON** – Java Script Object Notation is used to encode all data in the system in a clean, consistent way. JSON is easy for an HTML5 user interface to consume. Remaining consistent makes applications easier to develop and easier to maintain.
- **CSS** – Cascading Style Sheets separate the style (colors, fonts, other details of the way a page looks) from the structure of the view itself. CSS style sheets can be leveraged fully in applications supported by Agile Adapter.
- **JavaScript®** – AngularJS of course runs on all the recent versions of JavaScript. To develop user interfaces developers need to know JavaScript.
- **XML** – While JSON is far easier for a user interface to consume, XML can also be used in Interstage BPM applications as a data transport format. XML is sometimes the only choice for accessing legacy services that already exist in organizations.
- **XSLT** – XML Schema Language Transformation is a scripting language that can be used to transform XML documents into other forms. XSLT scripts can be used within the system if desired, but it is not required.
- **XPDL** – The eXtensible Process Definition Language is used as a standard for importing and exporting process definitions.
- **BPMN** – The Business Process Model Notation is used as the visual representation of the process in all places where a process is visualized.
- **SSL, HTTPS** – Secure Sockets Layer, as well as HTTP on top of SSL, is an important mechanism to assure the privacy of the traffic from the server to the browser and back.

About Fujitsu Americas

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