3TP PLATFORM

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➤ Executive Summary

Unlike other digital experience platforms, 3TP has number of modules that make it easy to automate any type of processes with less time and effort.

A business process may be used by company's internal users (Employees) or external users (Customers & non-customers), and here 3TP can help companies to design and publish any type of processes based on the business needs.

On 3TP, a business process is a set of the following:
- ✓ Data form -web page- used by users to input, amend, view or delete data.
- ✓ Server side Low-code (VB.NET or C#) to perform special actions related to the process.
- ✓ CSS Style to custom the user interface.
- ✓ Java Script to perform actions on the client side browser.
- ✓ Workflow where the process passed from one person to another for action according to a set of procedural rules.

To make it easy to build a process with less time and effort, 3TP has the following features:
- ✓ Drag-and-Drop process designer and form builder.
- ✓ Drag-and-Drop workflow designer.
- ✓ Drag-and-Drop report designer.
- ✓ Drag-and-Drop query designer.
- ✓ Drag-and-Drop document designer.
- ✓ Drag-and-Drop IVR (Interactive Voice Response) designer.
- ✓ Custom user interface with CSS style.
- ✓ Multi-Lingual interface for any business process.
- ✓ Integration layer with 3rd party systems.
- ✓ SMS Queue to manage outgoing SMS messages.
- ✓ Email Queue to manage outgoing Email messages.
- ✓ Tasks tool to schedule tasks to be executed on a specific time.

Regarding users accounts, 3TP supports the following:
- ✓ Local accounts.
- ✓ Active Directory accounts.

3TP is a multi-company multi-branch, where using the same application a user can login to different companies where he has access by typing : UserId@CompanyId or CompanyId\UserId in the login page of the system in addition to the account password.

3TP database could be SQL Server and/or Oracle with the ability to connect to more than one database by splitting system tables into different databases.

The feature of splitting system tables into different databases is useful when some tables have huge number of records (e.g.: Transactions and logs) so these tables could be moved to different database

without affecting the performance and stability of the system. The following Figure shows the main architecture of the system database:
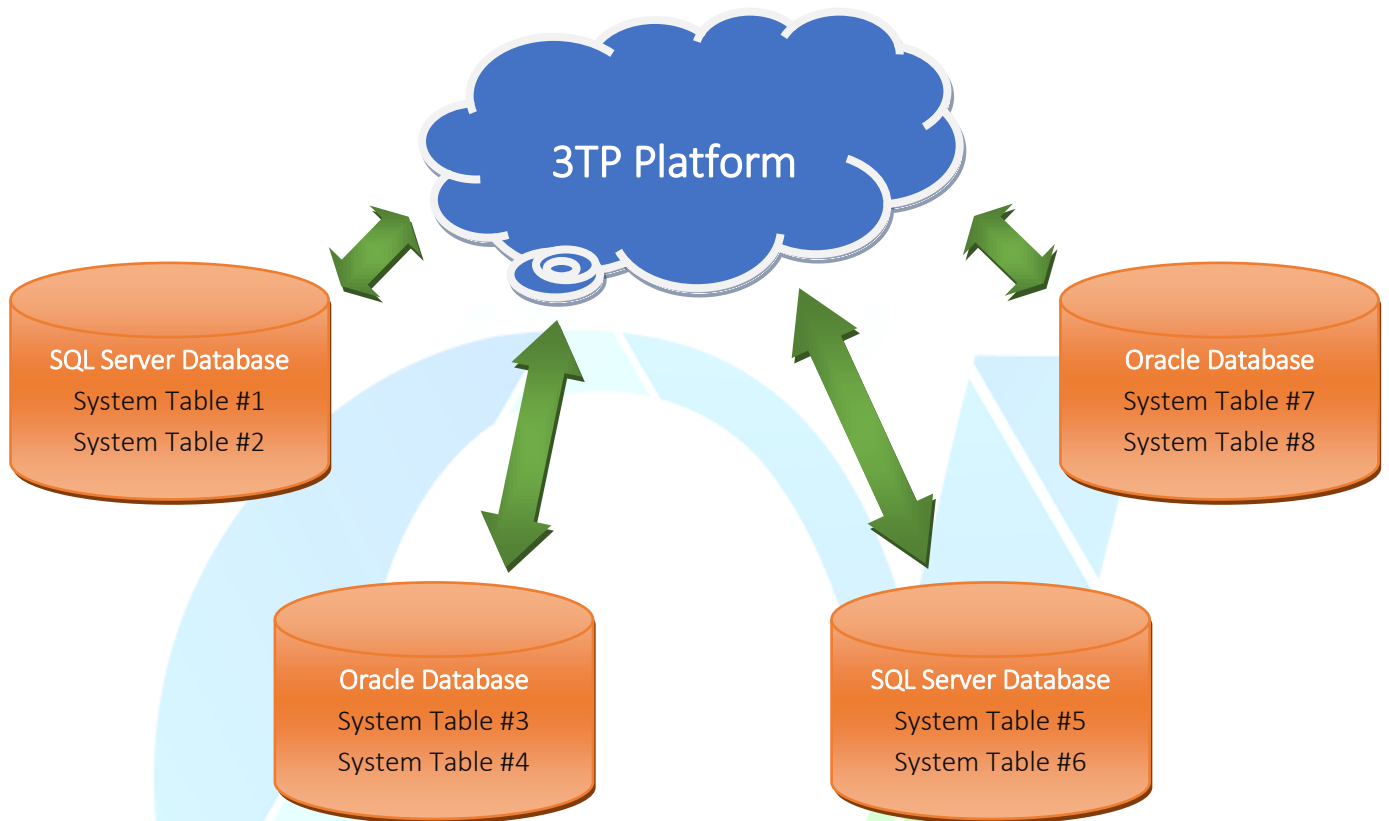
So 3TP may have one database (SQL Server or Oracle) where all system tables found, or may have more than one database and more than one database type based on the architecture agreed.

- ❖ In case of multi-company, each company's tables may be in a different database, or in the same database but different schema.
- ❖ When login to a specific company, that company is isolated from other companies.
- ❖ System administrator may generate consolidated reports from all defined companies.

Based on the types of business processes built on top of 3TP and how it was easy and fast to build them, we say that NO limitation of automating any type of business processes. Following are some types of automated business processes on top of 3TP:
- ✓ Individual Customer Onboarding.
- ✓ Corporate Customer Onboarding.
- ✓ Loan origination.
- ✓ Credit Card Onboarding.
- ✓ Universal Teller Module.
- ✓ Post Dated Cheques management.
- ✓ Dashboarding and data analytics.
- ✓ Budgeting module.

➢ Technical Overview

1. Introduction

Tiresias Theatre Technology Platform (3TP) is a multi-tier platform consisting of many technology engines carefully nurtured and coherently connected to minimize coding efforts to accelerate business change. The unique technical capabilities of the multiple 3TP engines enable automating business content of different levels of complexity.

3TP is **API-enabled** that makes organizations connect to multiple ecosystem players in their industry and across industries locally and cross border. Leveraging 3TP sufficiently contributes to building cognitive enterprises: digitally enabled, smart processes over differentiated workflows, leanly automated and real-time business and technical performance monitoring amongst others.

3TP playdough nature as –a near-no-code platform- significantly improves the Software Delivery Performance. It reduces the development lead time, reduces mean time to restore, reduces change fail percentage and increases the development frequency and accordingly, continuous delivery becomes am organization capability rather than a far-fetch wish which is what distinguishes High Performers from others.

The Theatre

The Theatre has its own Windows Management Services capability. This is a backend management service of the system that is applied to certain internal processes that need not be processed in the frontend web part of the software to boost the overall performance. Examples are many and include processes like executing complex workflows, generating different types of reports, importing files and downloading files from FTP/SFTP servers.

Tiresias Theatre Technology Platform (3TP) can be used to relatively rapidly develop industry agnostic cognitive business platforms and allows limitless continuous innovation.

Mobility

3TP can expose itself as a customer front end mobile and online portal utilizing its android based mobility module which is an integral part of the overall technology built. The relationship between 3TP web-based backend and its clients front end is based on full synchronization from development to operations.

2. System Modules

3TP Platform is a web based dynamic platform consists of the following modules and features:

2.1 3TP Version Designer (3TPVD)

Version Designer is an agile GUI builder. Screens as plainly known to users can be built and various validation rules including conditional and across-fields rules can be applied in addition to the possibility to apply the multi-value feature to the fields of the system. The actions of input, amend, delete, view can be assigned to the screens and write directly to the system database or via the system workflow.

Number of forms could be built to use the same data source, or input data to the same data source, hence called "Version" designer.

Controls in the built version "form" include: TextBox, CheckBox, TextArea, Dropdown List, DatePicker, FileBox, LocationBox ...etc.,

✓ With the feature of drag-and-drop it's easy and fast to create any form and process with only drag controls from the toolbox and drop on the working stage.
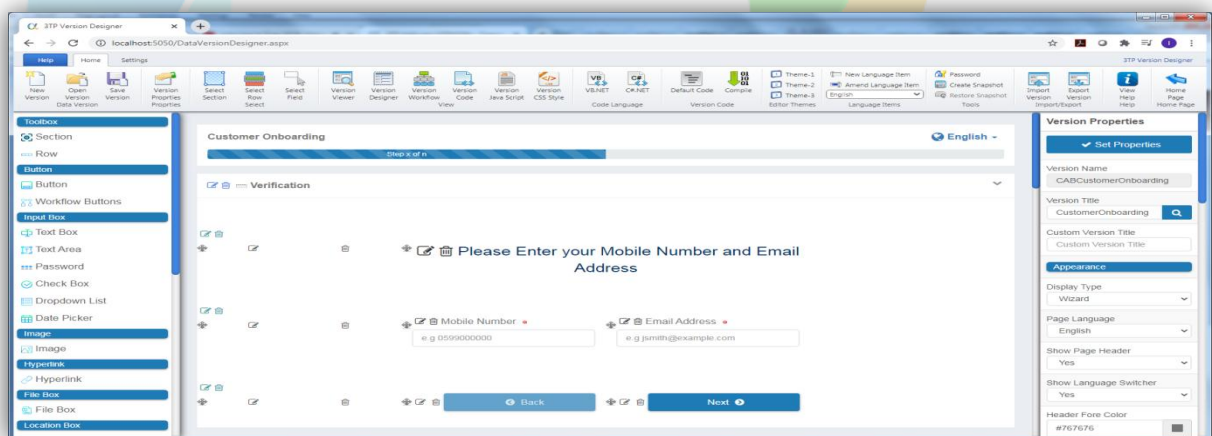
✓ To customize user interface, custom style is easily applied on the form controls by writing CSS styles directly in the CSS window of the designer:
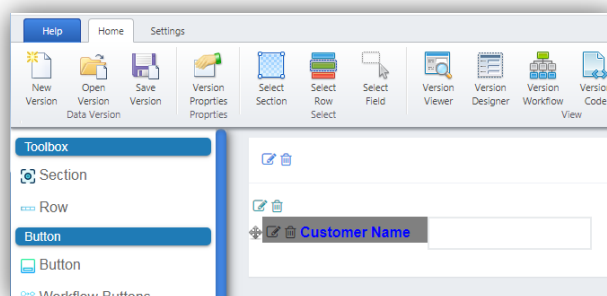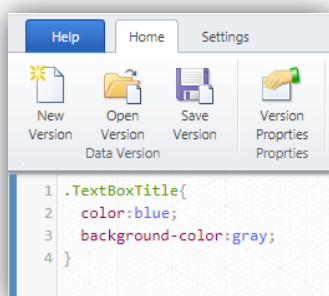
✓ To run client side scripts, a special window is available to write Java Script that will be executed on the client browser:

✓ To execute a server side code related to a specific process, two choices are available for developers, either write VB.NET code, or C# code with the feature of code compile:

✓ With the feature of multi-lingual, all labels and texts in the form can be easily defined and assigned to controls:

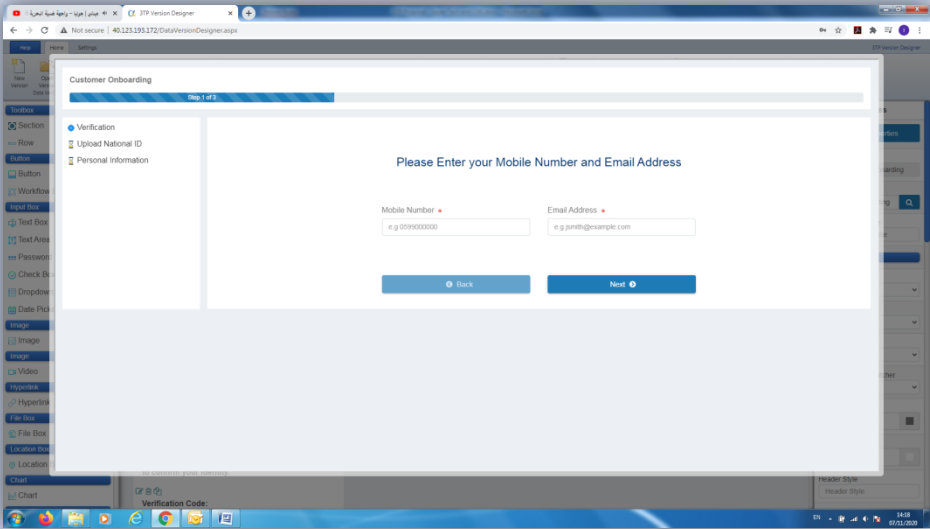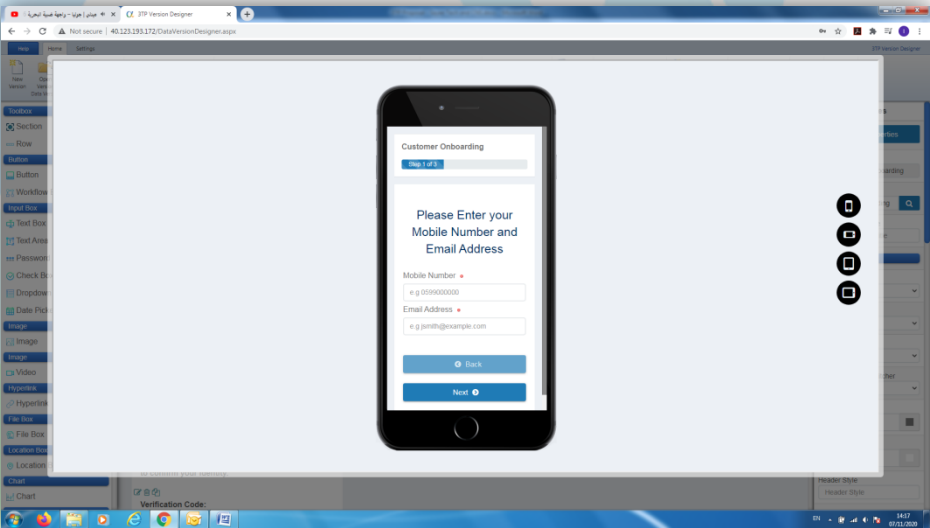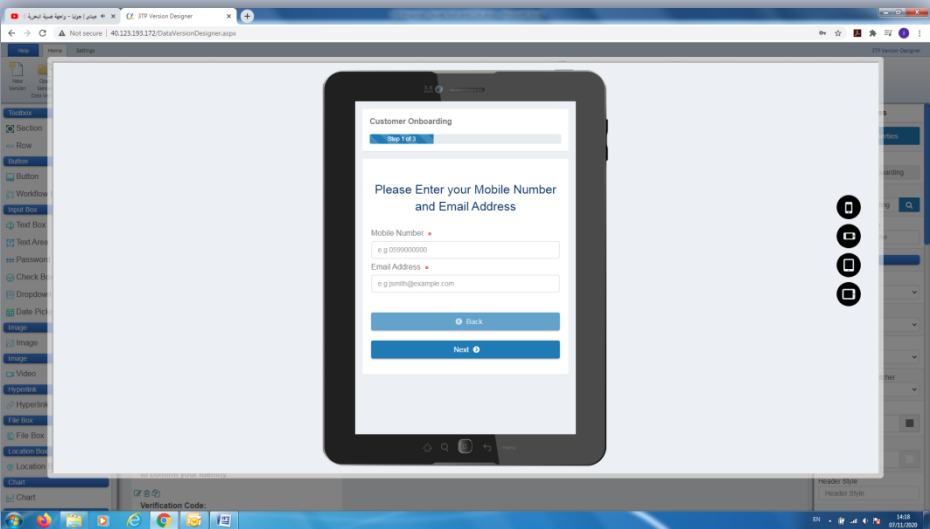✓ Process designer can direct view how the form and process will appear to users:

Device	View
PC /Laptop	
Mobile	
Tablet	

2.2 3TP Alerts and Notifications Manager (3TPAN)

Unlimited number of events can be configured in multi-language in the 3TPAN to send different massage in the form of alert or notifications. Massages can be sent in different forms: SMS, email, in-system screen alerts and push notifications via the mobile version of the system.
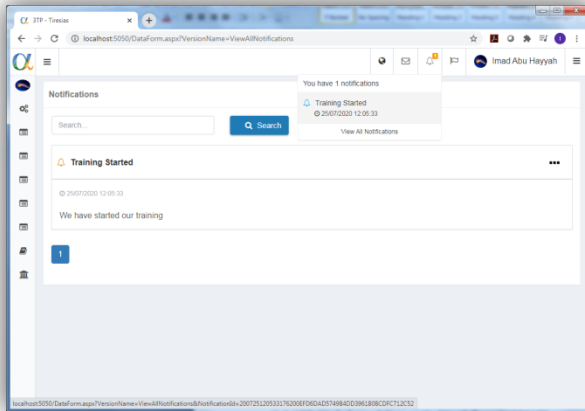
✓ **Notifications viewer:**

User can view all within-the-system notifications using the notification viewer where user can:
1. Hide notifications.
2. Mark notifications As Seen.
3. Mark notifications As Unseen.
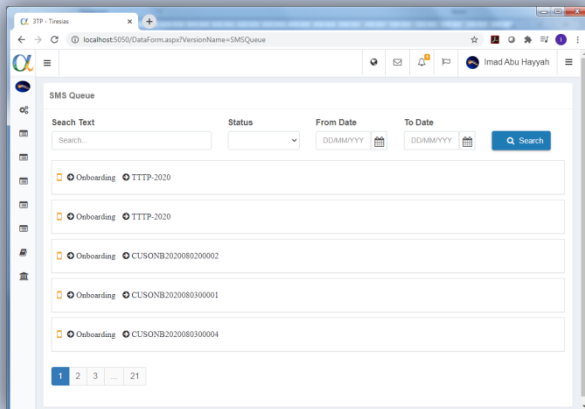
✓ **SMS Queue:**

System admin can view and manage all outgoing SMS messages, with the ability to:
1. Cancel sending SMS messages.
2. Reschedule sending SMS messages.
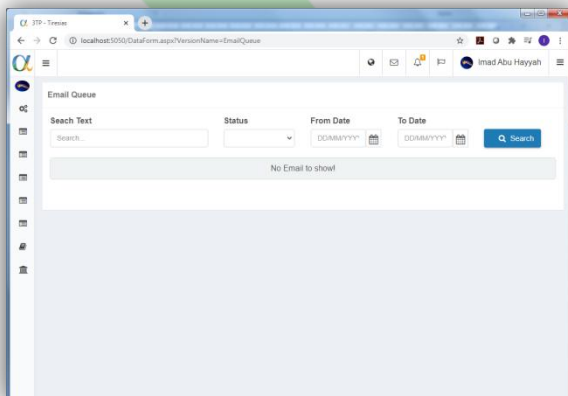
✓ **Email Queue:**

System admin can view and manage all outgoing email messages, with the ability to:
1. Cancel sending email messages.
2. Reschedule sending email messages.

2.3 3TP Web-based Dynamic Workflow (3TPWF)

3TPWF is web-based designer with drag-drop features and seamlessly available and integrated with all the 3TP various engines. This is a non-linear type of workflow and not only manages the normal process flow from maker to checker, but also supports assigning specific authorities at a field level (e.g., if an inputted value exceeds a certain level, the flow is routed to a certain senior official to take a call).

All nodes in the workflow designer are configurable based on the target system where the workflow will be executed.

✓ With the feature of drag-and-drop it's easy and fast to create any workflow of a process with only drag workflow node from the toolbox and drop on the working stage.
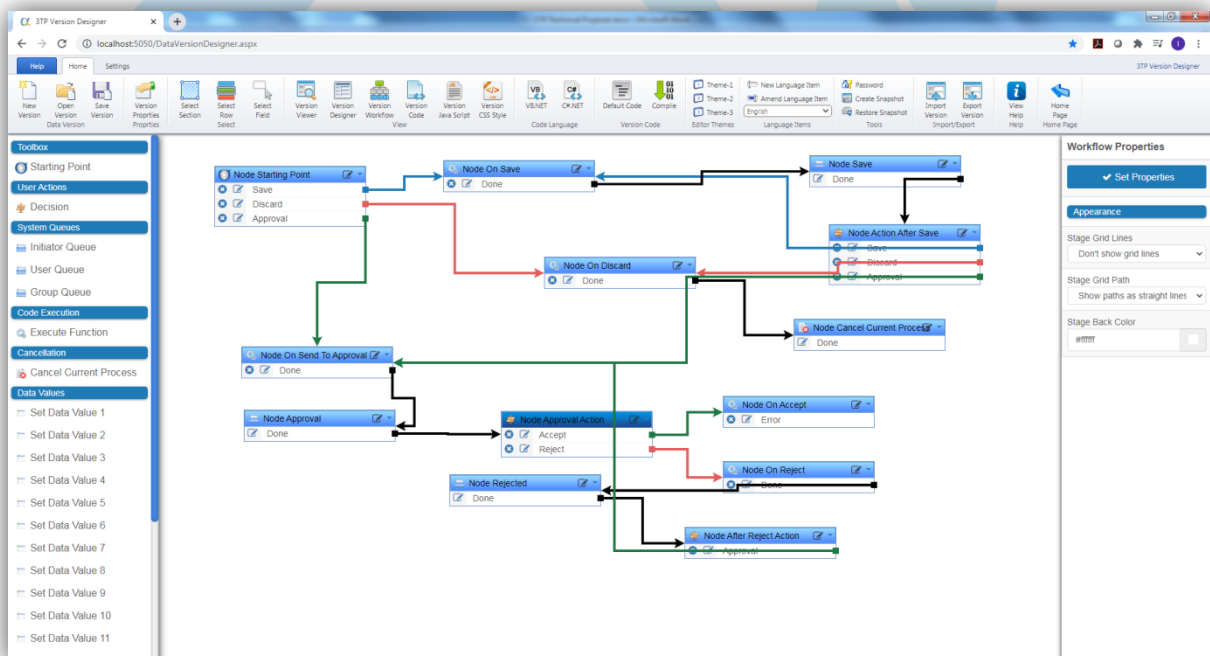
✓ Changing the workflow of a process will not affect any of the started or in progress processes, so workflow could be changed while users are using the system.
✓ The flow of the workflow of a process is logged in the system database.
✓ Before amending a workflow, a snapshot could be taken of the workflow, so user can rollback.
✓ From within the workflow, user can execute custom code written in the process code.
✓ From within the workflow, user can connect to an API to send/receive data to/from 3rd party system.
✓ Approval levels are unlimited for each process.
✓ Approval options are unlimited.

2.4 3TP Online Chat (3TPOC)

3TPOC is a seamlessly integrated inter-system chatting module to increase collaboration internally between the organization's various business users, their supervisors and externally between them and the organization's clients.

The chatting module works at the system level and at process level based on pre-defined users' rights individually and part of groups simulating the organization's several functions and departments.

Business users engaged in executing any of the system processes can seek their peers' and or supervisors' assistance and can communicate with them for pre-validation advises to avoid rework resulting from defected process rejections. The same is also possible between clients and their designated relationship managers while lodging their various requests on the organization's customers' online portal.

The chatting module enables users and clients to seamlessly share their screens with designated stakeholders and the full event with the details of the conversation will be archived in the process audit log and be part of it for any possible future reviews.

2.5 3TP Business Intelligence (3TPBI)

The 3TPBI modules facilitates reports generation directly from the system database without any limitations based on business need criteria. The reports could be generated based on user request as a PDF or excel type.

PDF reports can be generated in the desired user-defined design using the functionalities of the embedded report designer engine.

Same is applicable to the excel type reports in terms of using the report designer to produce the output in user-defined formats. The produced excel reports maintain full excel functions (e.g., macros) from within the system itself.

Additionally, this module caters for the design of different dashboards that are capable of refreshing data presented in front of its users in a real-time manner as things happen as a result of the execution of the system processes.

2.6 3TP Robotics (3TPROB)

Typical Robotic Process Automation Module (RBA) allowing to configure a software to imitate the human actions/tasks within a digital platform to robotically execute what is human manual processes and tasks. 3TPROB uses the user interface to login, inquire and get results just a human being will do.

Unlike humans, it is available 24X7X365 and makes zero mistakes resulting in boosting the availability to execute in a speedy manner and thus efficiency and effectiveness of operations will witness a high spike.

❖ Out of the box Robots are:

1. Extract Civil information from Jordan Civil Affairs Portal
2. Extract Civil status (Black Listed or Not) from Jordan Central Bank Portal
3. Extract Civil salary from Jordan Social Security Portal
4. Extract company information from Jordan Ministry of Industry, Trade and Supply
5. Extract company information from Jordan Companies Control Department

2.7 3TP Open Connectivity Manager (3TPOCM)

Gone are the days when the only way to interact with an organization was through a browser-based website or desktop. The world is getting digitized and APIs are becoming the currency of commerce.

3TP platform can be integrated with any 3rd party system by consuming exposed APIs of that system. And also, other systems can consume 3TP methods through exposed methods of 3TP, where all 3TP methods are exposed as web services.

3TP supports SOAP &RESTFUL (on both massage formats of JSON &XML)services and supports web socket connectivity using SignalR. To create a process on 3TP from 3rd party system, a standard service from 3TP side can be consumed "CreateDataProcess", which accepts the process data as encrypted XML.

The response is an encrypted XML string. The encryption used by the system is AES-128 bit, and each integration user has a specific encryption key used to encrypt request XML, and decrypt response XML.

2.8 3TP Client Hardware Integration Agent (3TPHIA)

The Hardware management integrations agent is a client application installed on user PC. 3TPHIA integrates the system with hardware SDKs and it is a desktop application developed using Visual Studio 2017.

2.9 3TP Add-ons (3TPADN)

Tiresias is continuously investing in integrating its 3TP with 3rd party Software and hardware based on their usage popularity amongst different industries with a special focus on the banking Industry.

The availability of such integrations in the out-of-the-box form of 3TP help accelerate projects implementation at client's side. The following 3rd party software and hardware are available in 3TP:

6. Morpho chip card and fingerprint readers
7. Wacom Digital signature pads of all sizes
8. MagTec PIN pad for debit and credit cards
9. Regula Document Scanner (e.g., Passports, National IDs, Travel Visas) and OCR SDK
10. Salesforce CRM
11. Temenos Core Banking System
12. Siron Embargo of FICO
13. Jordan Civil Affairs Portal (Robotics)
14. Jordan Central Bank Portal (Robotics)
15. Jordan Social Security Portal (Robotics)
16. Jordan Ministry of Industry, Trade and Supply (Robotics)
17. Jordan Companies Control Department (Robotics)

3. User Security Protocols

3TP supports the following :
- ✓ Local accounts.
  Account status and password policy are managed by 3TP. Permissions within 3TP are managed by system administrator using special forms.
- ✓ Active Directory accounts.
  Account status and password policy are managed by Active Directory. Permissions within 3TP are managed by system administrator using special forms.

Users can be granted permissions based on process type, form type, and function type.

4. Documents Archiving Technique

3TP supports the following:

- ✓ Archiving documents in 3TP database.
- ✓ Archiving documents in a special database under 3TP.
- ✓ Archiving documents in a 3rd party document management system through APIs.

5. Separation of Duties

In 3TP, the workflow of a process may have one level of authorization or more, single authorizer or combined authorizers.

The workflow designer can decide the flow and separation of duties per process.

6. 3TP Hardware Requirements

❖ The system will be deployed on three servers:
1. Production Server with high availability.
2. Development Server.
3. Testing Server.

❖ All servers are Windows based OS with Windows 2012 or later operating system.
❖ System will have a dedicated server for database with SQL Server 2012 or later, or Oracle 12c or later with redundancy server.
❖ Total number of servers required is 6 servers with the following specs:

Type	Component	Minimum Requirement
CPU	HTTP Server	2.5 GHz with native 64-bit support
	Database server	2.5 GHz with native 64-bit support
Memory	HTTP Server	16 GB
	Database server	8 GB
Hard Drive free space	HTTP Server	500 GB
	Database server	1 TB
Operating system	HTTP Server	Windows Server 2012 R2 64 bits
	Database server	Windows Server 2012 R2 64 bits

The End