INFOSYS WORKING CAPITAL ANALYTICS POWERED BY INFOSYS GENOME SOLUTION

Enabling working capital management with a data-driven analytical approach

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Working capital management is one of the most critical focus areas for enterprises to manage the disruptions across supply / demand value chains and stay healthy. Unprecedented crises disrupt cash flow by manifolds pressuring the finance departments to align with data in near real-time and keep up with emerging situations to dynamically manage their cash positions, payables and receivables.

The office of CFO needs to continuously monitor the trends of DSO/DPO/DIO and optimize the cash conversion cycle. They need to work with lenders to identify appropriate funding at right points in the supply chain and invest excess capital to maximize returns.

Key challenges in working capital management

Fragmented and siloed data and formats

In large enterprises, system landscape is quite diverse with many ERP products and capital management solutions. The teams perform analysis in silos, on different platforms and in different formats. In some enterprises, even payment terms are negotiated in silos. In small and medium enterprises, most working capital analysis is done on excel sheets for each metric. This results in sub-optimal decisions on investments and borrowings, impacting the working capital. This ad-hoc approach and reliance on manual ways limits the organization to effectively manage working capital.

Use case based approach for Analytics

Different teams in an enterprise leverage analytics on a use case basis to address challenges on working capital management. This use case based approach calls for huge cost and effort for every data science life cycle. The data discovery and data preparation cycles are extremely cumbersome to manage thus affecting the time to market significantly. The insights are also sub-optimal as enterprises are blind-sighted on sources of data across their enterprise.

> Enterprises need to have an agile data management and integration solution to create a strong 360-degree data foundation and a library of AI/ML models to ensure efficient working capital management.

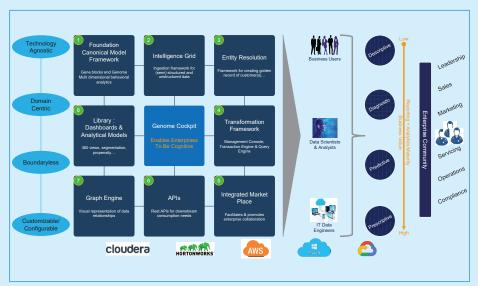# Infosys Working Capital Analytics powered by Infosys Genome Solution

Infosys Genome Solution with near real-time data integration/transformation and with a library of powerful AI models provides actionable insights for optimally managing working capital. The solution can integrate with the existing systems of record for financial data (Oracle, SAP or any other) and can be implemented on-premises or on cloud-based data-lake to provide the recommendations for actionable insights. For a large business, this can positively augment the functions of ERP systems and, for small and medium businesses it can be a quick means to optimize the payables and receivables.

Technology Features:

- End-to-end automation pipeline from data ingestion to transformation to consumption with components deployable on need basis

- A deep domain data model for one-stop data shop

- Self-service analytical data aggregating facility for scalability and reusability

- API based integration capabilities for actionizing recommendations

Functional Features

- Insights on working capital position & trends of factors such as cash position, accounts payable , account receivable, funding and costs
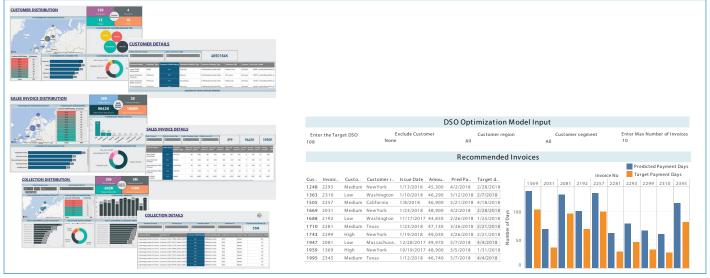

Features of Infosys Genome Solution

- DSO Optimization – Recommendation on the order and date of collection to achieve the target DSO using a scalable analytical model without need for exploratory analysis, training and testing. Ability to exclude customers, customer industry segments or regions from optimization

- DPO Optimization - Recommendation on the order of payment of purchase invoices based on heuristic reinforcement learning techniques that is scalable without need for exploratory analysis, training and testing

- Account level balance forecast using composite ML based modelling (requires exploratory analysis, training and testing for new segments of data)

- Maximize returns on idle cash with Smart Sweep Advice, an element of the solution

- Observe from the CFO office, the changes & trends of DSO, DPO, DIO & CCC on strategic decisions

- An ever expanding library of designs for insights & analytical models

Prioritized execution approach

While the solution has a wide range of features, some of the most critical use cases that can be prioritized by Treasury management department for immediate actions are:

- **Accounts Receivable Analytics**
  - o User Story: As the Treasury Manager of my organization, I need insights on my receivables and recommendations to achieve a target days sales outstanding, in order to focus my collection efforts efficiently to improve the cash flow.

- **Accounts Payable Analytics**
  - o User Story: As the Treasury Manager of my organization, I need insights & recommendations on my payables beyond the capabilities of my ERP, in order to organize my payments for optimum cash flow.

- **Cash Balance Forecasting and Smart Sweeps**
  - o User Story: As the Treasury Manager of my organization, I need a reliable forecast of the balances in the accounts, in order to optimize the sweep strategy with the bank and reduce idle capital.

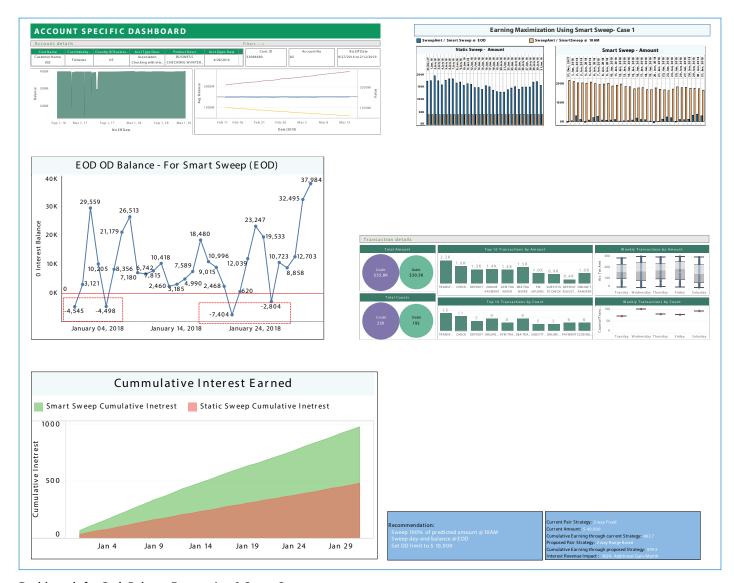**Dashboards for Receivables Insights & Advanced Analytics**

Dashboards for Payables Insights & Advanced Analytics

Benefits of Infosys Working Capital Analytics Solution

- Increased optimization of receivables & payables through the application of analytical models

- Insights on suppliers, customers and their payment patterns to decide dynamic discounts and partial payments

- Insights to plan for receivables financing, pre-shipment finances and for negotiations on changing payment terms

- Reduce idle cash and excess working capital reservation

- Prevent occasional short-term dips and spikes in the past balances driving the sweep strategies

Recommendations for negotiating appropriate payment terms, what-if analysis on the impact of dynamic discounting, waivers and extensions on the cash position, probability of delaying or defaulting on invoice payments, inventory insights, insights for revenue forecasting & budgeting are being worked upon.

ACCOUNT SPECIFIC DASHBOARD

Account details

Cust Name	Cust Industry	Country Of Busines...	Acct Type Desc	Product Descr	Acct Open Date	Cont. ID	Account No	Biz Eff Date
Customer Name 002	Fisheries	US	Association Checking with Inte...	BUSINESS CHECKING W/INTER...	6/28/2016	33098690	All	9/27/2016 to 2/12/2019

Earning Maximization Using Smart Sweep- Case 1

Static Sweep - Amount | Smart Sweep - Amount

EOD OD Balance - For Smart Sweep (EOD)

Transaction details

Total Amount — Credit $35.8K — Debit $30.5K
Total Counts — Credit 230 — Debit 192

Top 10 Transactions by Amount
Weekly Transactions by Amount
Top 10 Transactions by Count
Weekly Transactions by Count

Cummulative Interest Earned

- Smart Sweep Cumulative Inetrest
- Static Sweep Cumulative Inetrest

Recommendation:
Sweep 100% of predicted amount @ 10AM
Sweep day-end balance @ EOD
Set OD limit to $ 10,000

Current Pair Strategy: 2 way Fixed
Current Amount: 40,000
Cumulative Earning through current Strategy: 482.7
Proposed Pair Strategy: way Range Based
Cumulative Earning through proposed Strategy: 979.5
Interest Revenue Impact: 182% Additional Gain/Month

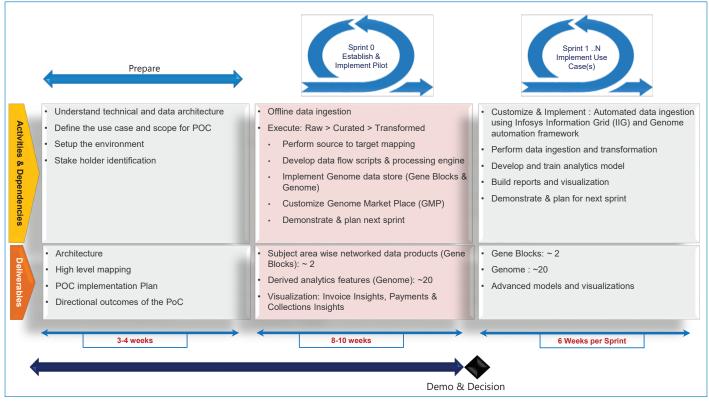**Dashboards for Cash Balance Forecasting & Smart Sweeps**

Agile Implementation

An agile approach is employed for implementation of Infosys Working Capital Analytics Solution.

The above mentioned benefits can be implemented in 10 to 12 weeks. Use cases that cannot be scaled for diverse data such as 'cash balance forecasting' will need exploratory data analysis, training and testing of models at each phase.

- **Discovery** – 2 weeks of discovery to identify and analyze the sources, their data models and formats

- **DevOps based pilot use case** – 8-10 weeks of data mapping, installing Genome accelerators, pipelines configuration, implementation of analytical model and dashboards, testing and scheduling

- **Sprint-wise augmentation** – 6 week sprints for subsequent use cases for data mapping, implementation, testing and scheduling

Prepare

Sprint 0 Establish & Implement Pilot

Sprint 1 ..N Implement Use Case(s)

Activities & Dependencies

- Understand technical and data architecture
- Define the use case and scope for POC
- Setup the environment
- Stake holder identification

- Offline data ingestion
- Execute: Raw > Curated > Transformed
  - Perform source to target mapping
  - Develop data flow scripts & processing engine
  - Implement Genome data store (Gene Blocks & Genome)
  - Customize Genome Market Place (GMP)
  - Demonstrate & plan next sprint

- Customize & Implement : Automated data ingestion using Infosys Information Grid (IIG) and Genome automation framework
- Perform data ingestion and transformation
- Develop and train analytics model
- Build reports and visualization
- Demonstrate & plan for next sprint

Deliverables

- Architecture
- High level mapping
- POC implementation Plan
- Directional outcomes of the PoC

- Subject area wise networked data products (Gene Blocks): ~ 2
- Derived analytics features (Genome): ~20
- Visualization: Invoice Insights, Payments & Collections Insights

- Gene Blocks: ~ 2
- Genome : ~20
- Advanced models and visualizations

3-4 weeks

8-10 weeks

6 Weeks per Sprint

Demo & Decision

Agile implementation approach

For more information, contact askus@infosys.com

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