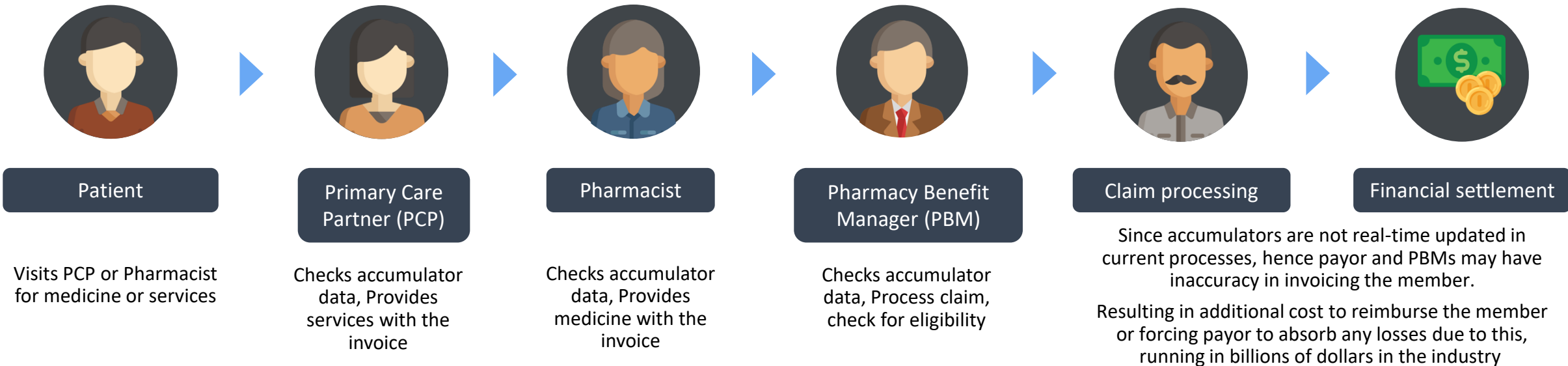## A HEALTHCARE TECHNOLOGY COMPANY

Transformed the health insurance benefits and claims process with a blockchain-based technology platform

CONTEXT – CURRENT PROCESS

Insurance claim and reimbursement process lifecycle for patient

Patient

Visits PCP or Pharmacist for medicine or services

Primary Care Partner (PCP)

Checks accumulator data, Provides services with the invoice

Pharmacist

Checks accumulator data, Provides medicine with the invoice

Pharmacy Benefit Manager (PBM)

Checks accumulator data, Process claim, check for eligibility

Claim processing

Since accumulators are not real-time updated in current processes, hence payor and PBMs may have inaccuracy in invoicing the member.

Resulting in additional cost to reimburse the member or forcing payor to absorb any losses due to this, running in billions of dollars in the industry

Financial settlement

~5%

Provider refunds to consumers is expected to grow by 5 percent from 2018 to 2022. The report estimates refunds totaled 2.6 billion in 2018 and will total 3.1 billion in 2022.

(Source)

CHALLENGES – CURRENT PROCESS

Membership → **Manual Process** → **Accumulator** → **Reconciliation Rules** → **PAYMENTS**

- **Membership**
  - Multiple IDs for single member
  - No identity coordination

- **Manual Process**
  - Manual update of details by PBM
  - Available limit to be determined every time.

- **Accumulator**
  - No accumulator awareness or transparency between delegated partners
  - Significant reconciliation, adjustment, and member friction

- **Reconciliation Rules**
  - Inconsistencies in accumulator rules between partners
  - Adjudications done based on stale accumulator data

- **PAYMENTS**
  - Discrepancy in financial resolution, which may result in a bill or member reimbursement or simply a loss absorption by the payer

1 Lack of transparency between accumulator and partner

2 Manual processes leading to higher reconciliation costs, FTEs and member abrasion

3 Siloed systems and data without any real-time communications between them

4 Data duplication and discrepancies

OUR CLIENT AND CHAINYARD'S ROLE

Our client, a healthcare technology company was looking for a better solution to settle the claim, manage members, PBM, and benefit accumulator. They wanted to solve this at a industry level, so that the solution can be available to all healthcare benefit managers and transform benefit management ecosystem. Chainyard, with its extensive expertise and experience in providing Digital transformation solutions for diverse businesses, was chosen to provide a solution.
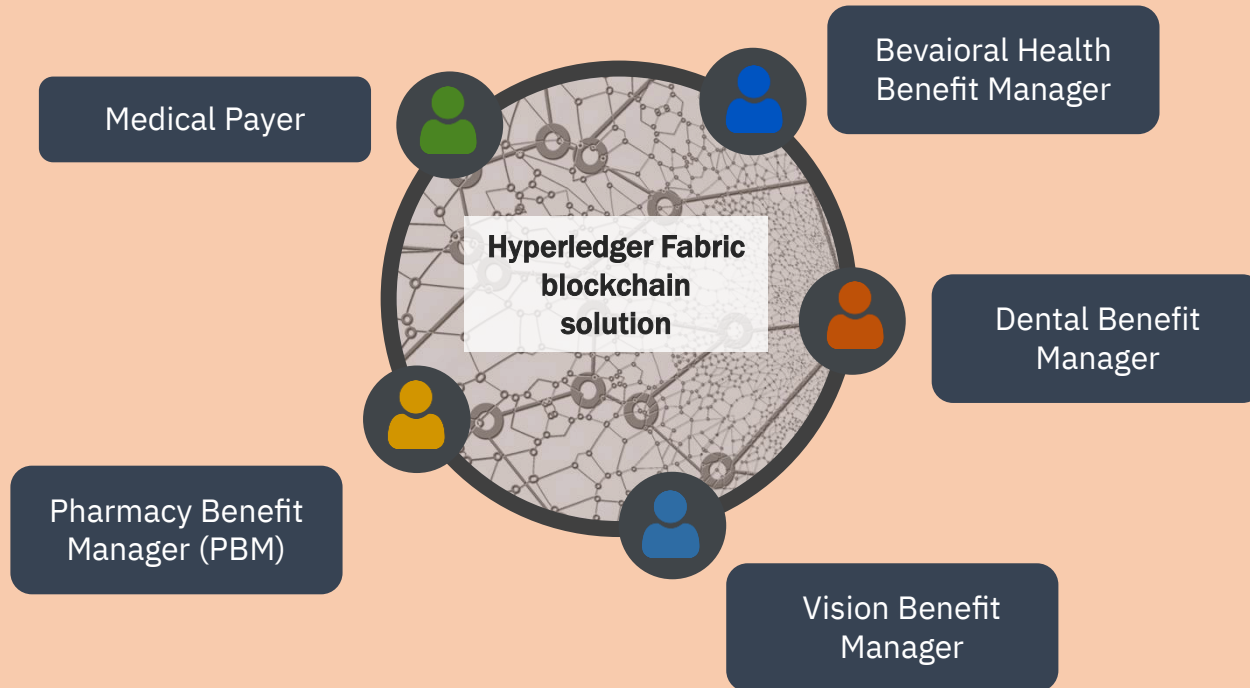
Chainyard is responsible for

- *Implementation of a decentralized environment for data sharing among different insurance companies, vision, dental and behavioral healthcare organizations and PBMs*

- *Supported development of APIs for Member, Benefit accumulator, and PBM management*

- *Completely transformed the UI/UX experience for test users to firsthand visualize the data*

SOLUTION – PARTICIPANTS & KEY TECHNOLOGIES

CHAINYARD

A secure open API SaaS solution built on blockchain-based distributed ledger platform for the health insurance benefits and claims process
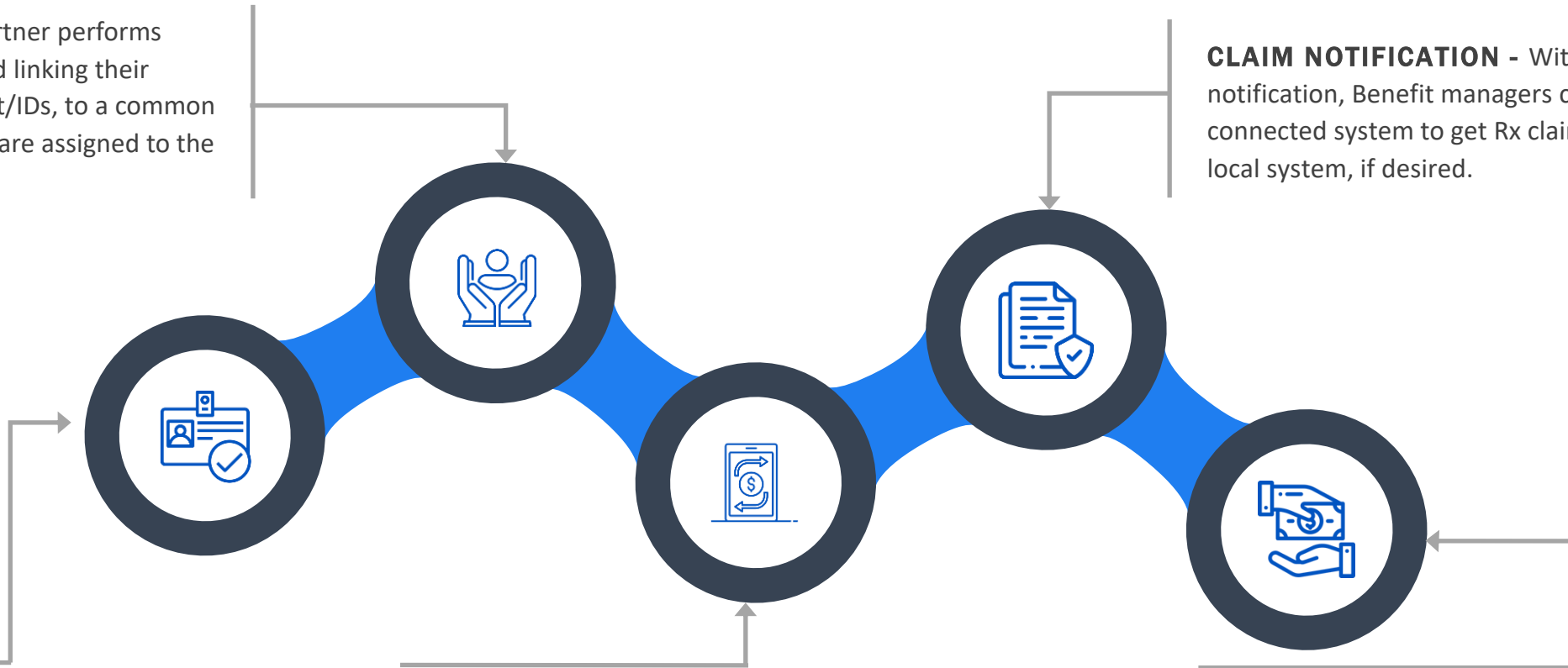
Medical Payer

Bevaioral Health Benefit Manager

Hyperledger Fabric blockchain solution

Dental Benefit Manager

Pharmacy Benefit Manager (PBM)

Vision Benefit Manager

KEY TOOLS & TECHNOLOGIES

Hyperledger Fabric	Angular	NodeJS
For blockchain platform	For UI components	For API-based services
Golang	MongoDB	**PostgreSQL & CouchDB**
For chain code	Non-blockchain database	Blockchain database
Terraform	Ansible Automation	**AWS Elastic Kubernetes Service**
For AWS services provisioning	For configuration / deployment	to host the platform
Palo Alto Networks	Crowdstrike	Prometheus
For firewall	For antivirus	event monitoring and alerting

NEW PROCESS

A consent based distributed exchange of member accumulator information, based on the Blockchain ledger to store and retrieve data in real-time.

ONBOARDING - Partner performs member matching and linking their member local contract/IDs, to a common AXC identity. Benefits are assigned to the contract locally.

CLAIM NOTIFICATION - With each claim notification, Benefit managers can use connected system to get Rx claim for their local system, if desired.
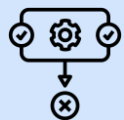
MEMBER ENROLLMENT – Group or individual selects the plan and enrolls into payer membership system and creates contract/IDs. Each delegated partner receives the member enrollment information

ADJUDICATION – All Claims (Medical, Pharmacy, Vision, Dental, Behavioral are submitted to respective benefit managers Iin real-time and benefit accumulators are updated transparently in real-time.

PAYMENTS - All parties responsible for managing benefits have access to a member's up-to-the-minute accumulator balances. The burden of reconciliation is eased due to the immediate distribution and transparency of an immutable ledger.

RESULTS – KEY BENEFITS

REDUCED MEMBER FRICTION

accurate payment at the pharmacy and medical provider

REDUCED RECONCILIATION TIME & EFFORT

with the right information available instantly between delegated network partners

REDUCED PAYER COST

due to real-time exchange of patient benefit utilization across the providers

RESULTS – KEY BENEFITS (contd.)

TRANSPARENT MEDICAL COSTS
estimates accurately the landed cost for patients based on use of accurate benefit accumulators

INCREASED VERACITY & TRANSPARENCY
of information with an immutable, distributed, single source of truth accessible by all participants

FASTER NEW PBM INTEGRATION
network effect and standard connection to any PBM solution, enables payers to quickly onboard new PBMs

CHAINYARD

THANK YOU

Blockchain