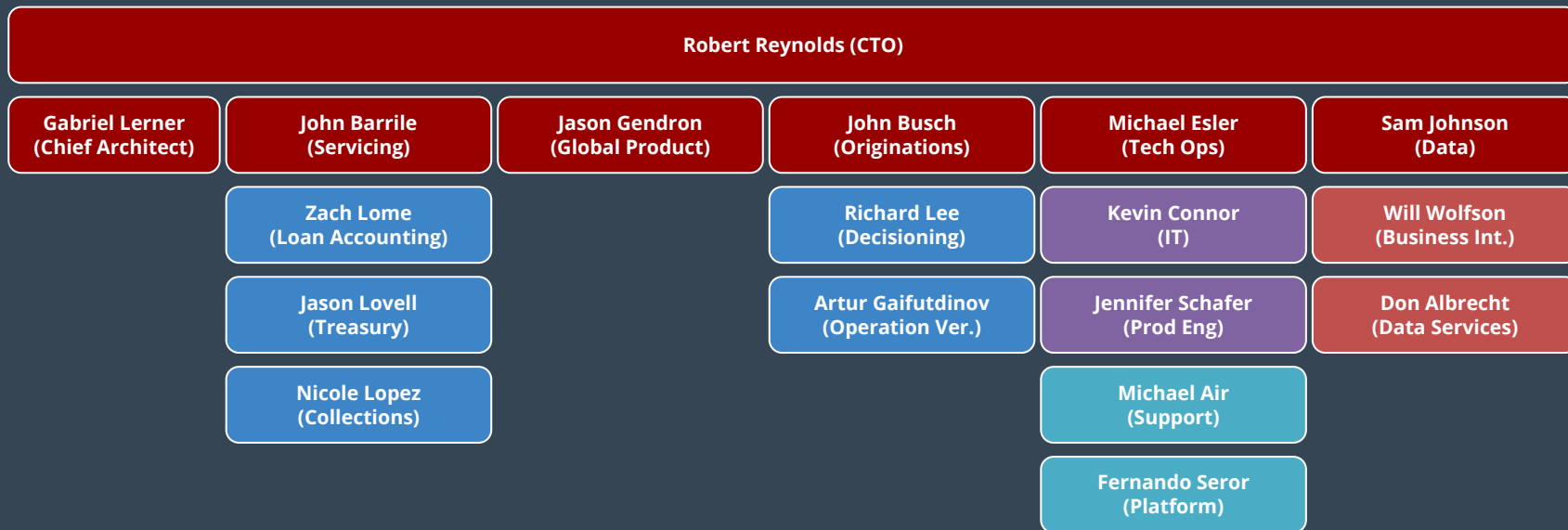


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General Avant Overview

AVANT

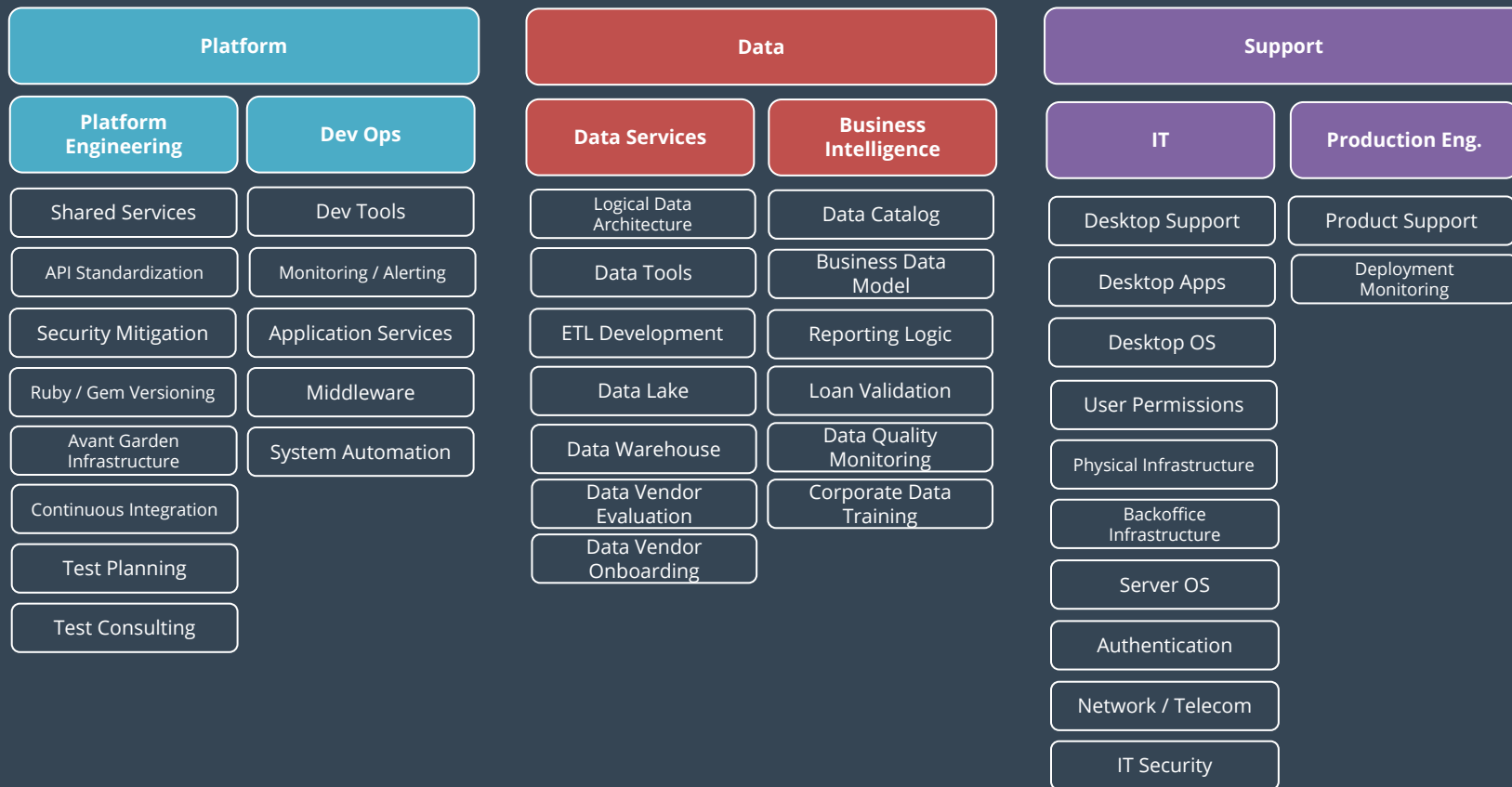
Tech/Prod Dev Org Chart



Product Development Responsibilities



Technology Operations Responsibilities



Avant-Basic Repositories

Frontend, Customer Application	avant-apply
Frontend, Customer Support	crm
Application Backend	avant-basic
Script Repo, Business Support	avant-garden
Modeling	avant-analytics
Document Template Management	avant-templates
Credit Card - API, Frontend, Gateway	credit-card-api credit-card-dashboard fdr-gateway
Payment Handling - ACH, Credit Card	payment-gateway
Payment Handling - RCC, Paper Check	lockbox

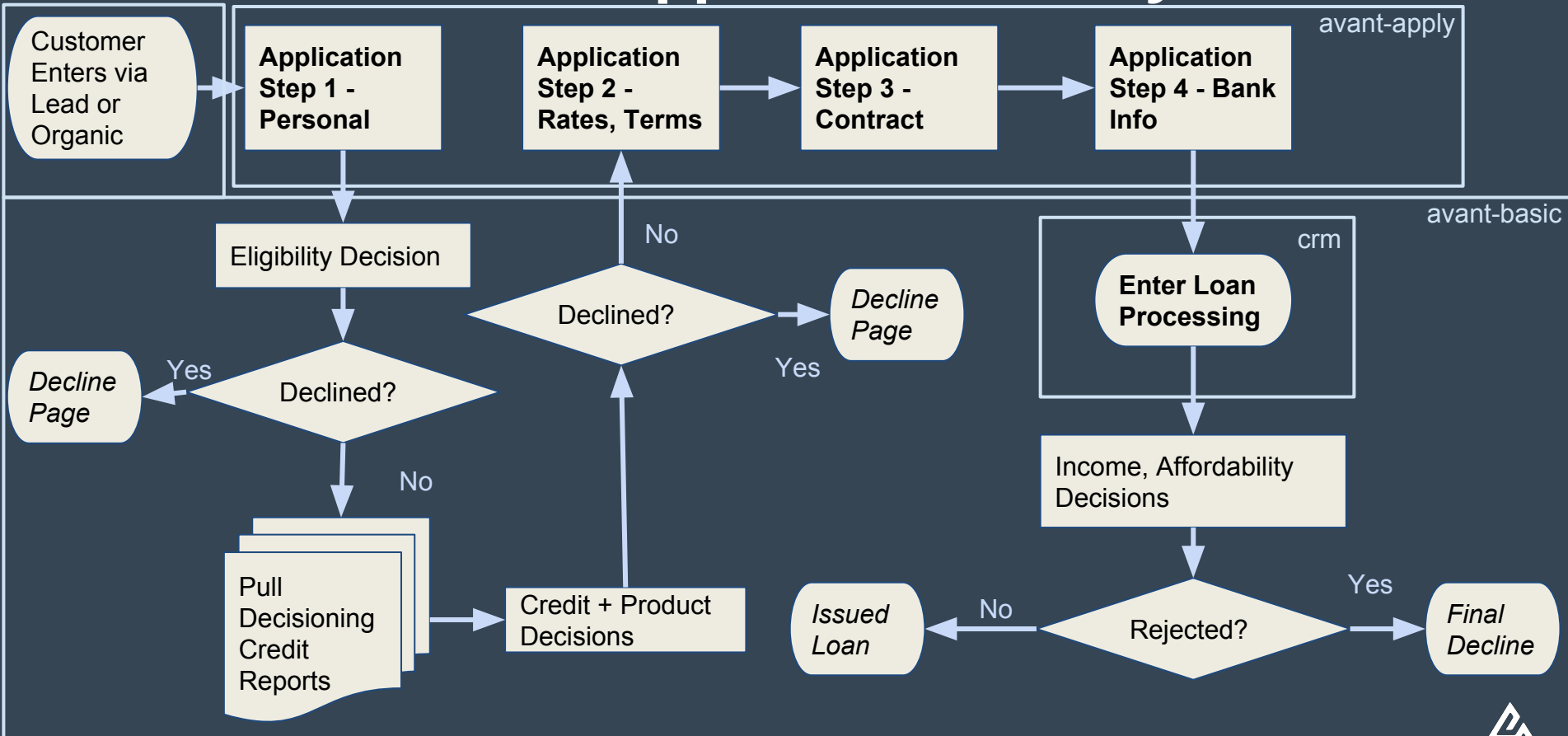


Avant Tech Tooling Vendors

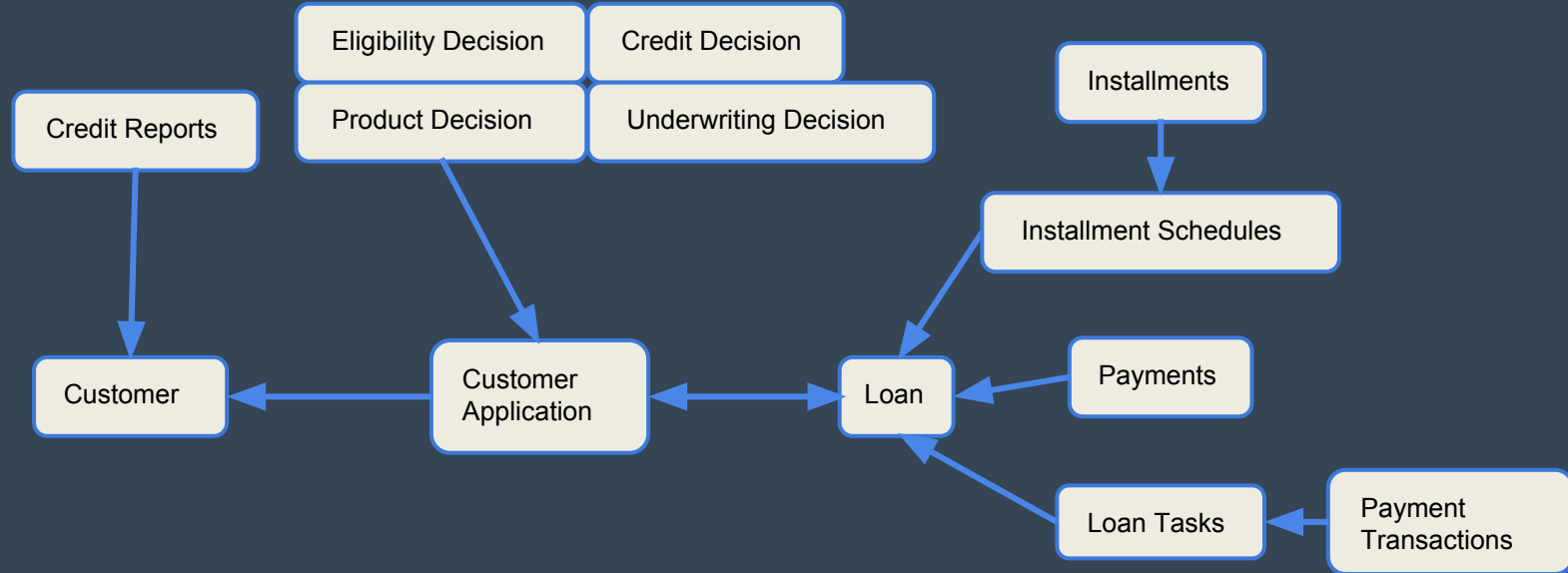
Analysis	DataDog, Looker
Bug Tracking	Sentry.io, HoneyBadger
Remote Storage	AWS S3, Redis, Vault
Deploy/Deploy Management	Heroku, ECS, Jenkins
Continuous Integration/Testing	CircleCI, CodeClimate
Wiki	Confluence
Task Management	PivotalTracker
Support (IT, Prod Eng, etc.)	JitBit, ServiceNow, PagerDuty
Log Tracking	SumoLogic



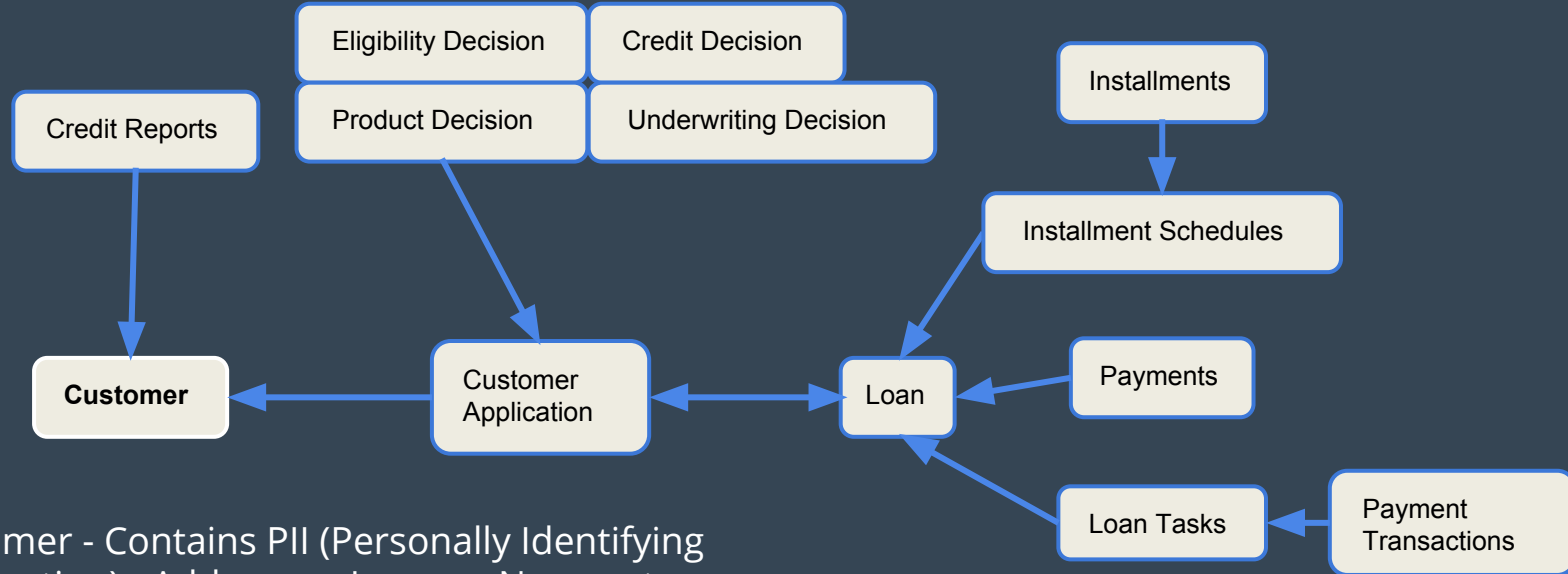
Customer Application Life Cycle



General Database Structure

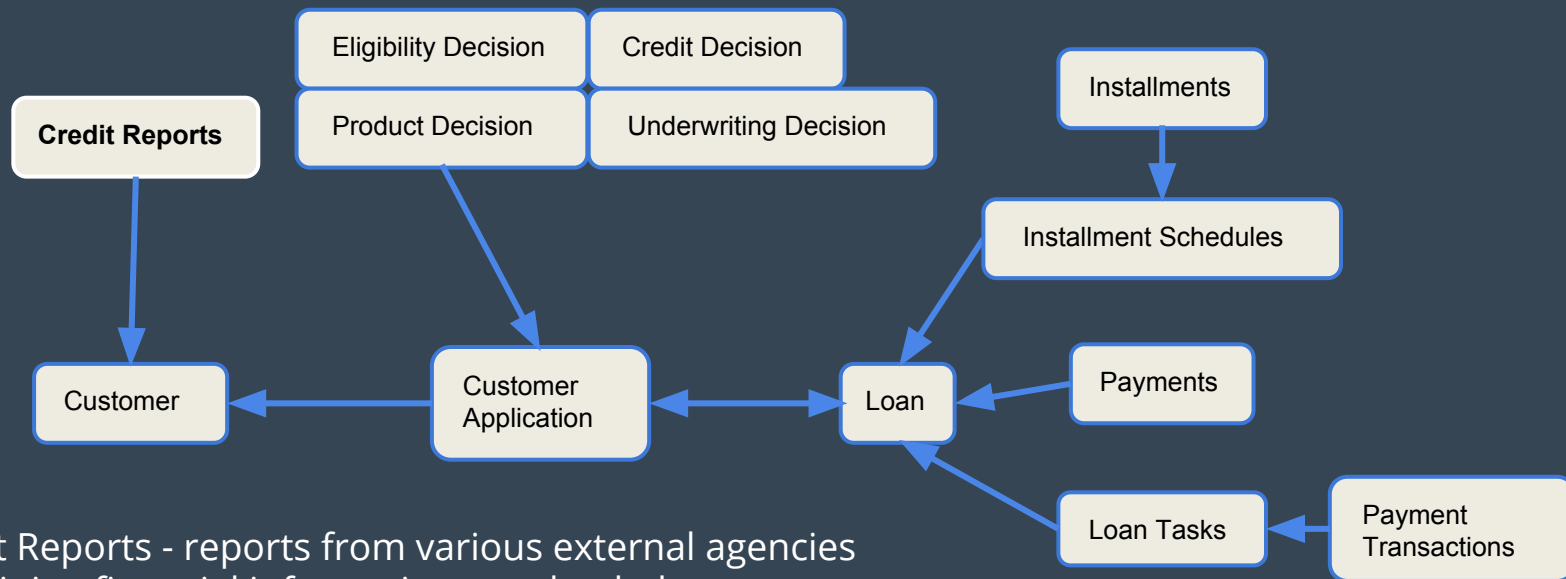


General Database Structure



Customer - Contains PII (Personally Identifying Information) - Addresses, Income, Name, etc.

General Database Structure

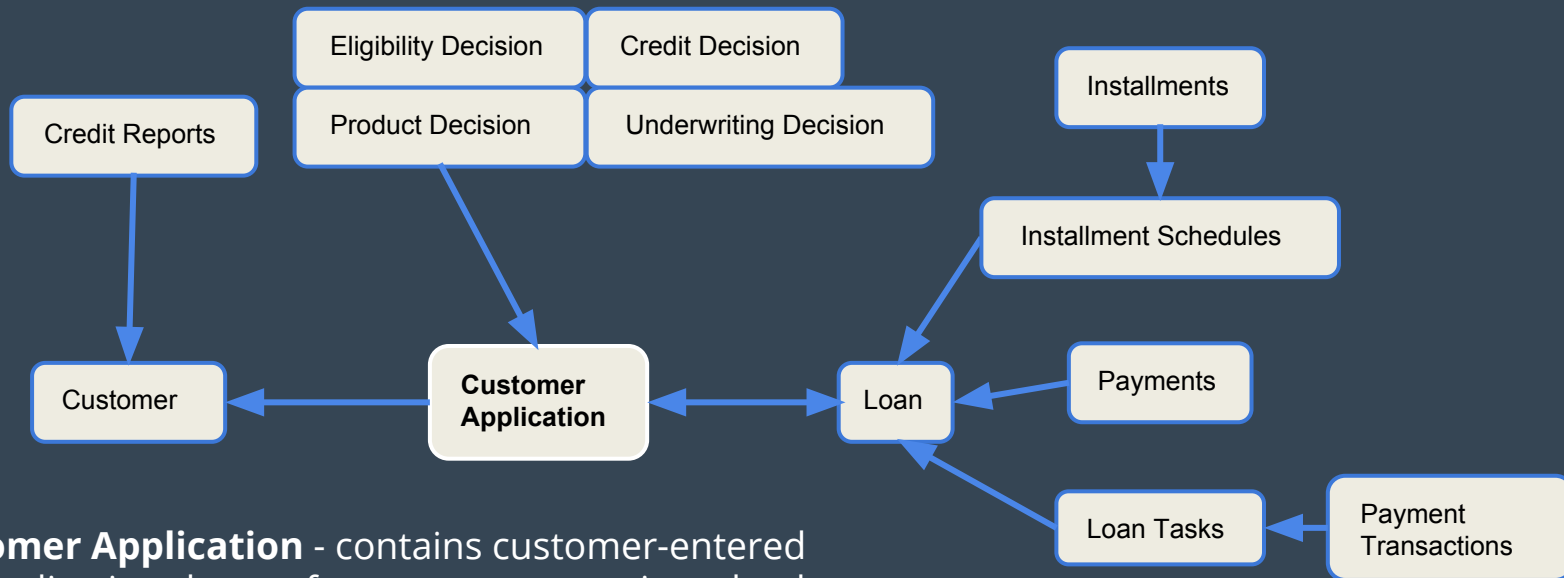


Credit Reports - reports from various external agencies containing financial information, used to help generate decisions

We pull from TransUnion, FactorTrust, DMS, EquiFax, CallCredit, Nuestar, and more

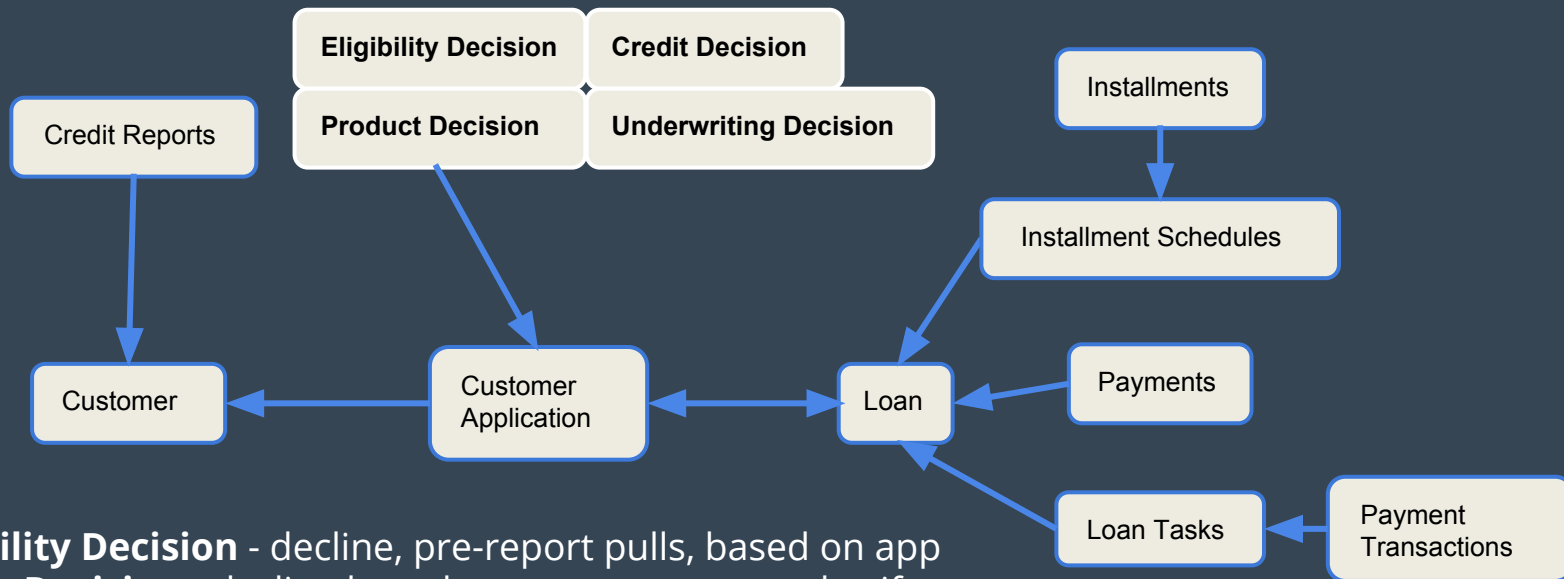


General Database Structure



Customer Application - contains customer-entered per-application data, references to promotions, leads, product selection, and policy-level configuration

General Database Structure



Eligibility Decision - decline, pre-report pulls, based on app

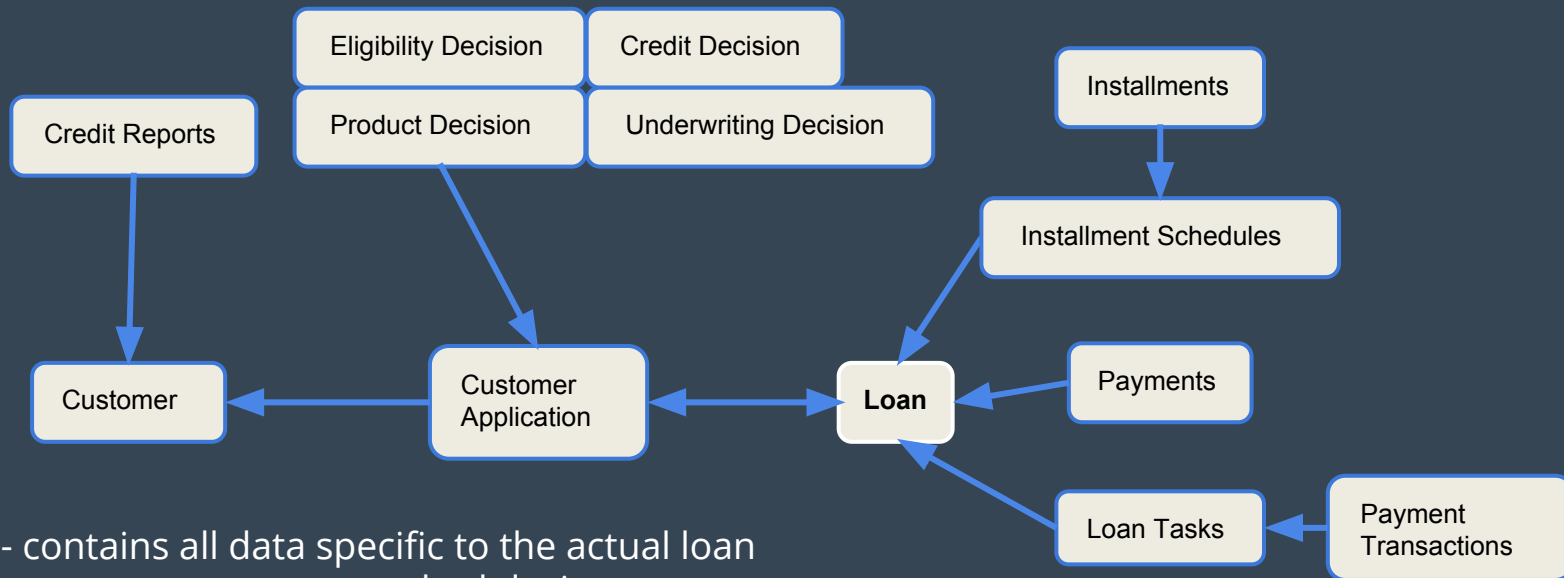
Credit Decision - decline based on app + report results; if not declined, determine appropriate *product rating* (APR, amounts)

Product Decision - given *product rating*, determine table of allowable terms/amounts

Underwriting Decision - before approving or issuing, ensure all data is correct -- contracts, terms, etc.

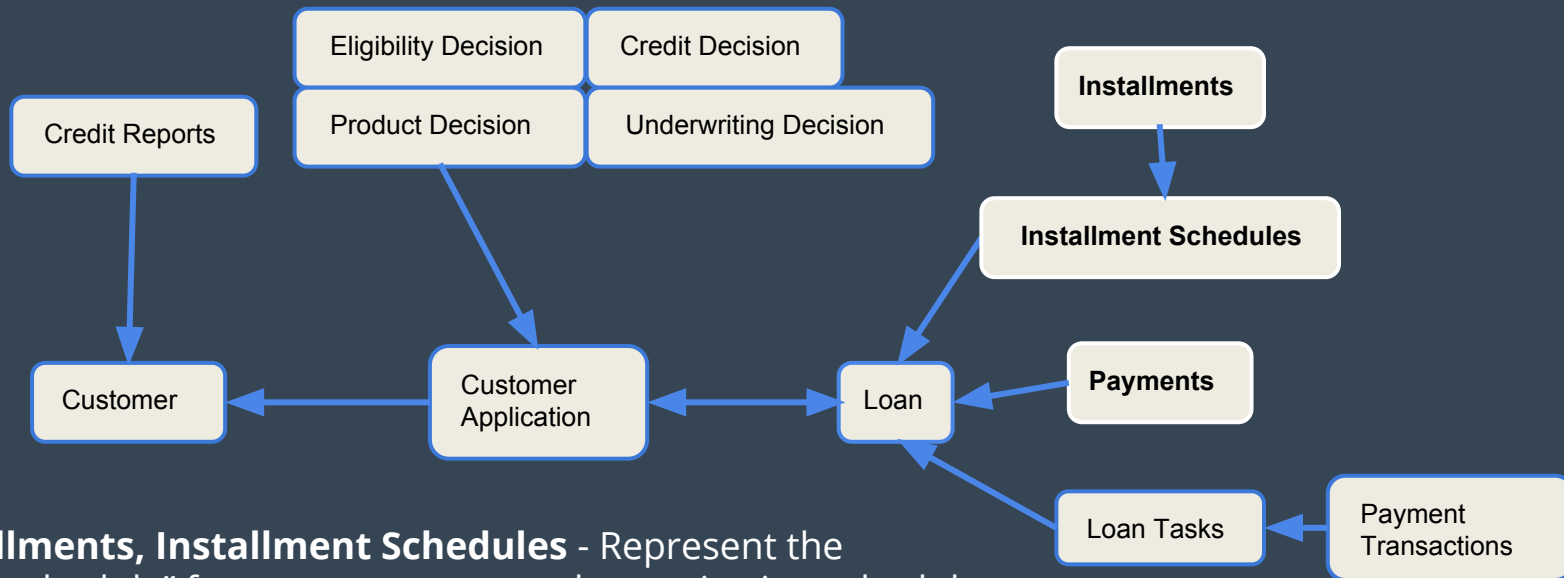


General Database Structure



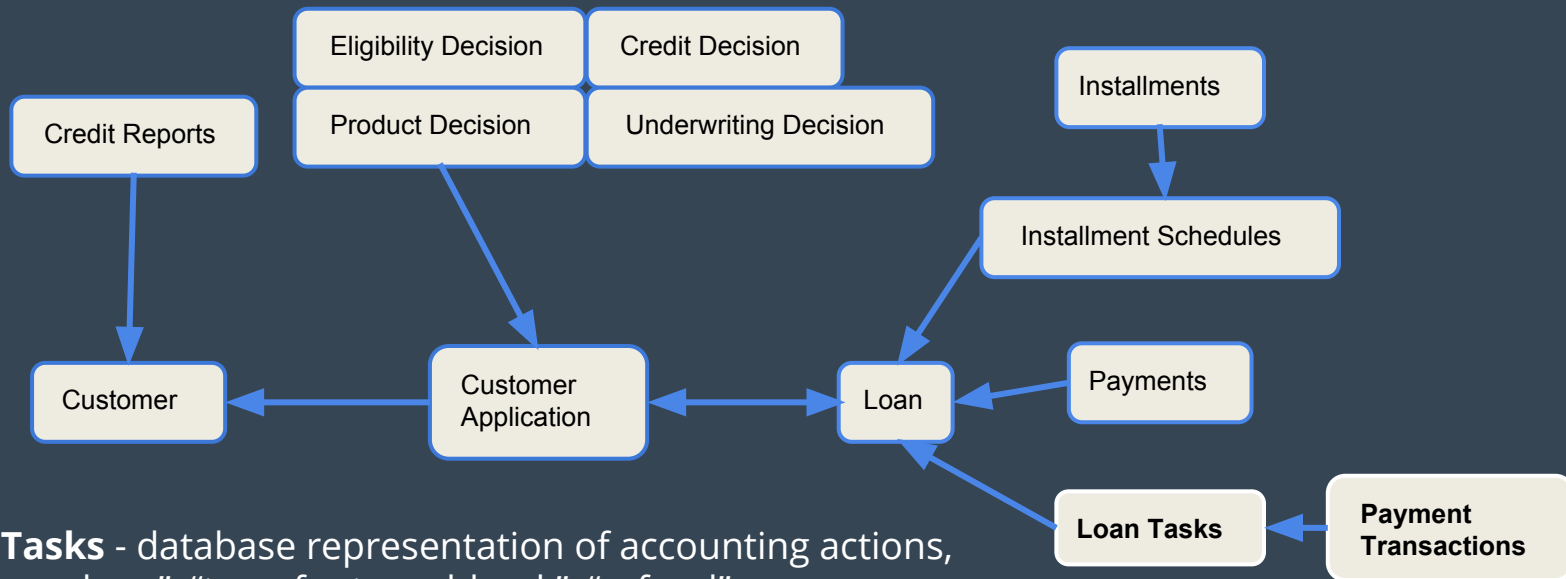
Loan - contains all data specific to the actual loan product, e.g. amount, term, schedule, interest rate, APR, etc.

General Database Structure



Installments, Installment Schedules - Represent the "Ideal schedule" for repayment -- actual amortization schedule
Payments - actual payments: automatic associated w/an installment; one-time by customer; automated "blind" payment after a return

General Database Structure



Loan Tasks - database representation of accounting actions, e.g. "issue loan", "transfer to webbank", "refund"

Payment Transactions - accounting bucket breakdown of each loan task, i.e. the payment waterfall - fees, interest, principal

Avant-Basic File System

- config/
 - policies - application-level configuration
 - initializers - Rails Initialization
 - customer_application - field configuration for application engine
 - sidekiq - asynchronous processor scheduling



Avant-Basic File System

- app/
 - models - ActiveRecord (rails) representation of DB table rows (over 450!)
 - controllers - Rails functionality to generate views for URLs
 - mailers - Rails functionality to generate emails by name
 - views - HAML templates w/coffeescript that represent pages, mail bodies
 - decorators, presenter - wrappers to models for presentation in views
 - workers - Sidekiq job classes for asynchronous running
 - resque_workers - Resque job classes for asynchronous running
 - observers - (deprecated) - callbacks on model changes
 - graph - GraphQL linkage



Avant-Basic File System

- lib/
 - action_runner - Interactor Library runner
 - avant - primary internal libraries (see next slide)
 - bin - tools for executables within avant-basic namespace
 - core_ext - monkey-patches to global objects
 - credit_reports - report gateways, processors
 - customer_application_engine - engine for customer application frontend flow per-product
 - domain_models - [domain models](#)
 - ops - Production Engineering hooks for live editing of data in Prod Console
 - payoff - Post-Issuance calculation of data
 - policies - per-application level configuration system
 - tasks - Rake task files
 - treasury - tools for treasury controllers/views



Avant-Basic File System

- lib/avant
 - ach (Post-Issuance) - support for taking/sending NACHA format files
 - actions (Architecture) - global Interactors for the [ActionRunner](#)
 - active_record_ext (Shared) - extensions to ActiveRecord
 - analytical (Pre-Issuance) - R server hooks, model data gathering
 - api (Business Operations) - API endpoints for Admin Portal, Telco, Mobile
 - converge (Post-Issuance) - Credit Card Payment Processing
 - customer_identifier (Post-Issuance) - customer matching for loan sales
 - decisioning (Pre-Issuance) - All Decision Engines + Stats Collectors
 - fact (Platform) - Redis-backed statistics caching library
 - interest_calculation (Post-Issuance) - libraries for calculating interest
 - lead_provider_behavior (Pre-Issuance) - mapping for incoming lead requests
 - queue (Pre-Issuance) - library for specialist work
 - responsys (Business Operations) - Responsys API for marketing emails
 - rulesets (shared) - DSL for various validation
 - state_logic_module (shared, deprecated) - state-specific configurations
 - work_item_processor (Pre-Issuance) - specialist work items

