

Build your Business Case

with Crowdbotics' CodeOps Assessment Engine



Last Updated: 5/30/2023

24 Month Partnership Aspirations

- 1,000 workshops focused on Microsoft Application Innovation
- 25 joint Microsoft and Crowdbotics assessment delivery partners
- \$100 Million dollars of attributed Azure consumption



Change the Discussion Change the Game

Our industry is aspiring to engage in strategic DevOps discussions but struggling with a strategic approach on how to engage partners at scale



GTM Proposal

Finding success together from pilot to scale

Phase I (60 Days) 8 Accounts	Phase II (60 Days) 25 Accounts
<ul style="list-style-type: none">• 2 Crowdbotics• 2 Solution Assessment• 2 With Partner• 2 MS Fin Serve Team	<ul style="list-style-type: none">• Solution Assessment team to formalize Crowdbotics assessment as an offering• Solution assessment team onboards Crowdbotics as a funding eligible services partner• Scale through joint partnerships as a standardized sales play• Crowdbotics to lead with Microsoft across all Enterprise and SMB sales motions



What is CodeOps?

Crowdbotics' operationalized approach to composable architecture, combined with AI assisted requirement and code development identifies and enables up to 70% code re-use, freeing developers to focus on what's new.

By modularizing code around repeatable scaffolding, Crowdbotics brings full code development, imbedded compliance, and 3rd party interoperability to more people faster.

Reduce the barrier to development
by shifting required expertise from endpoints and compliance to understanding customer needs

Promote innovation
by automating full-code, unconstrained, from day one with the power of AI

Reimagine Marketplace
by making integration plug-and-play

```
function doGetBreedsImageRandom(payload) {
  return doGetBreedsImageRandom()
}

const apiService = {
  doGetBreedsImageRandom: () => {
    // ...
  }
}
```

FEATURE NAME	DESCRIPTION	STATUS	DATE	PRICE
2FA Features		6	Jan 27, 2023	\$ 555.00
Legal Agreements Features		25	Feb 10, 2023	\$ 2,318.00
Basic User Profile Features		14	Feb 17, 2023	\$ 1,306.00
Bank Accounts and Cards Connect Features - P		128	Mar 24, 2023	\$ 12,148.00
Plaid Integration		36		\$ 3,528.00
Confirmation - pop up		5		\$ 457.00
Successful Demo Prompt		5		\$ 457.00
Action Failed Prompt		5		\$ 457.00
Connect Bank account - Select Bank		10		\$ 947.00

Acceptance Criteria

This feature will make a connection with Plaid integration that we will use for connecting different bank accounts and credit cards related to that accounts. Once the connection with plaid is provided, the user would be able to select a financial institution from a list.

As a user, I would be able to see a list of financial institutions covered by Plaid.



Demo



Our Approach to Data Driven Assessment



Planning

Gather information on business objectives, use of 3rd party developers and code preferences



<1 wk



Data Collection

Connect to or export project management contents; filetree, users, task structure and objectives



< 1 wk



Workshop

Structured approach based on AI driven comparison of data against CodeOps database and scaffolding insights



2-3 days



Recommendations

Align outputs to business objectives and refine templated recommendations presentation



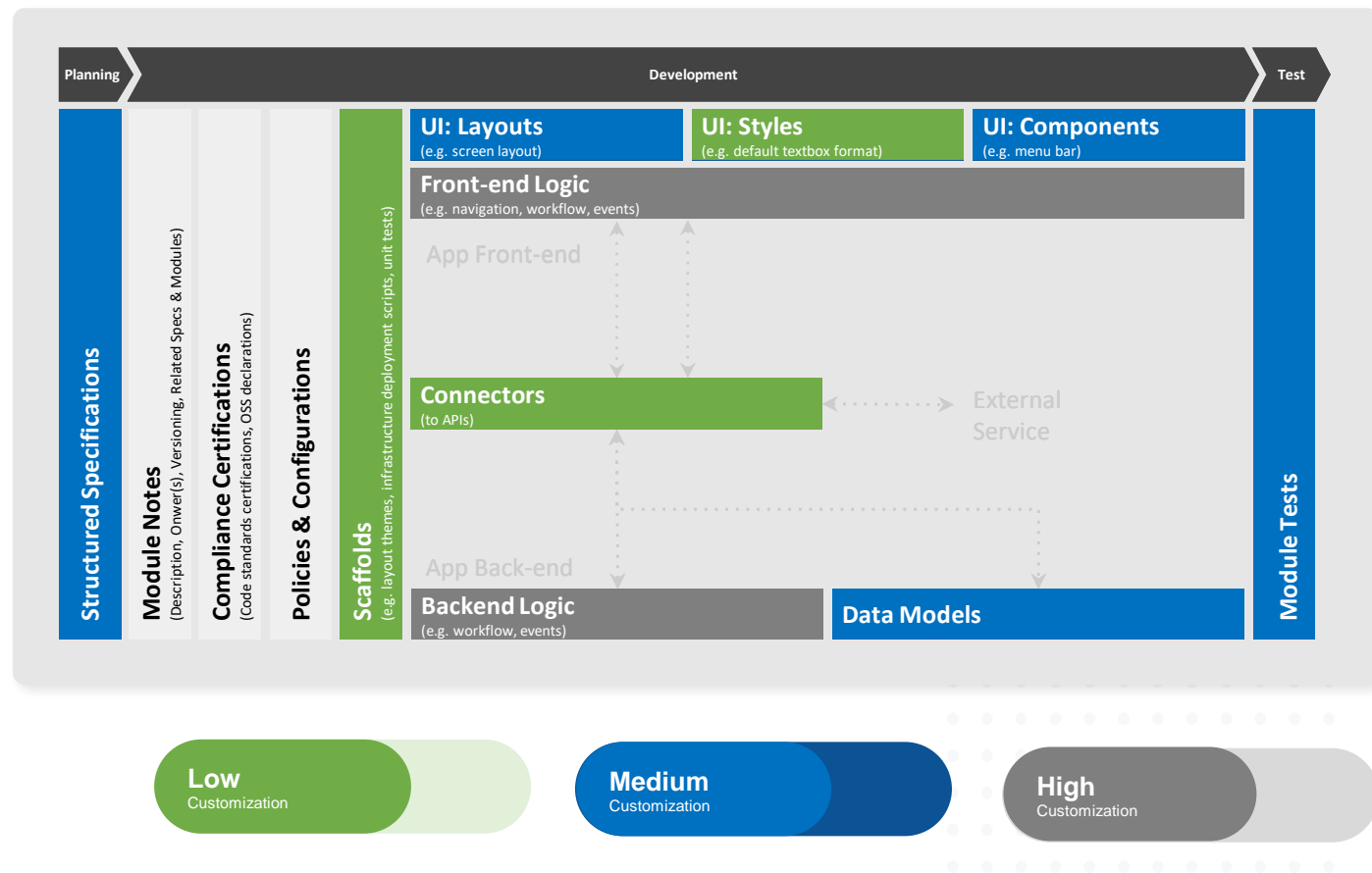
1-2 weeks



What is the CodeOps Assessment?

The assessment engine analyzes **real data** from an ISV's **project management environment**** against a test bed of thousands of applications and the CodeOps framework to **identify opportunities for cost savings, strategic accelerator development and code reuse** across the business through:

- Identification of immediate cost savings for current and planned projects
- Recommendations for composable architecture infrastructure to govern ongoing developer efficiencies
- Quantified feature parity for phased development of solution accelerators and development roadmap
- Exposed security and compliance anomalies and exceptions
- Summarized vendor product use cases and consolidation opportunities



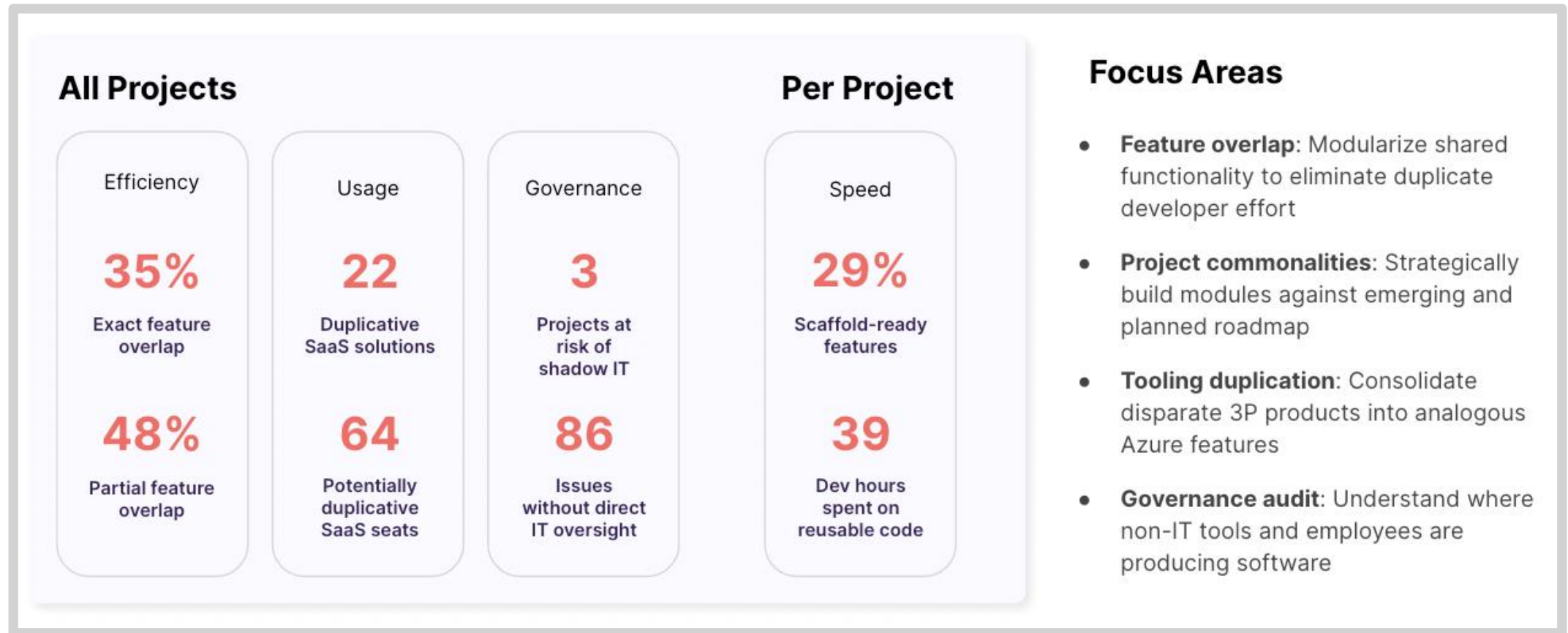
Example: Assessment Output

The CodeOps Assessment Engine leverages an AI based analysis to surface **recommendations aligned to Microsoft Solution Plays** in a templated presentation:

- Data and AI
- App Innovation
- Biz Apps
- Infra
- Data Security and Governance

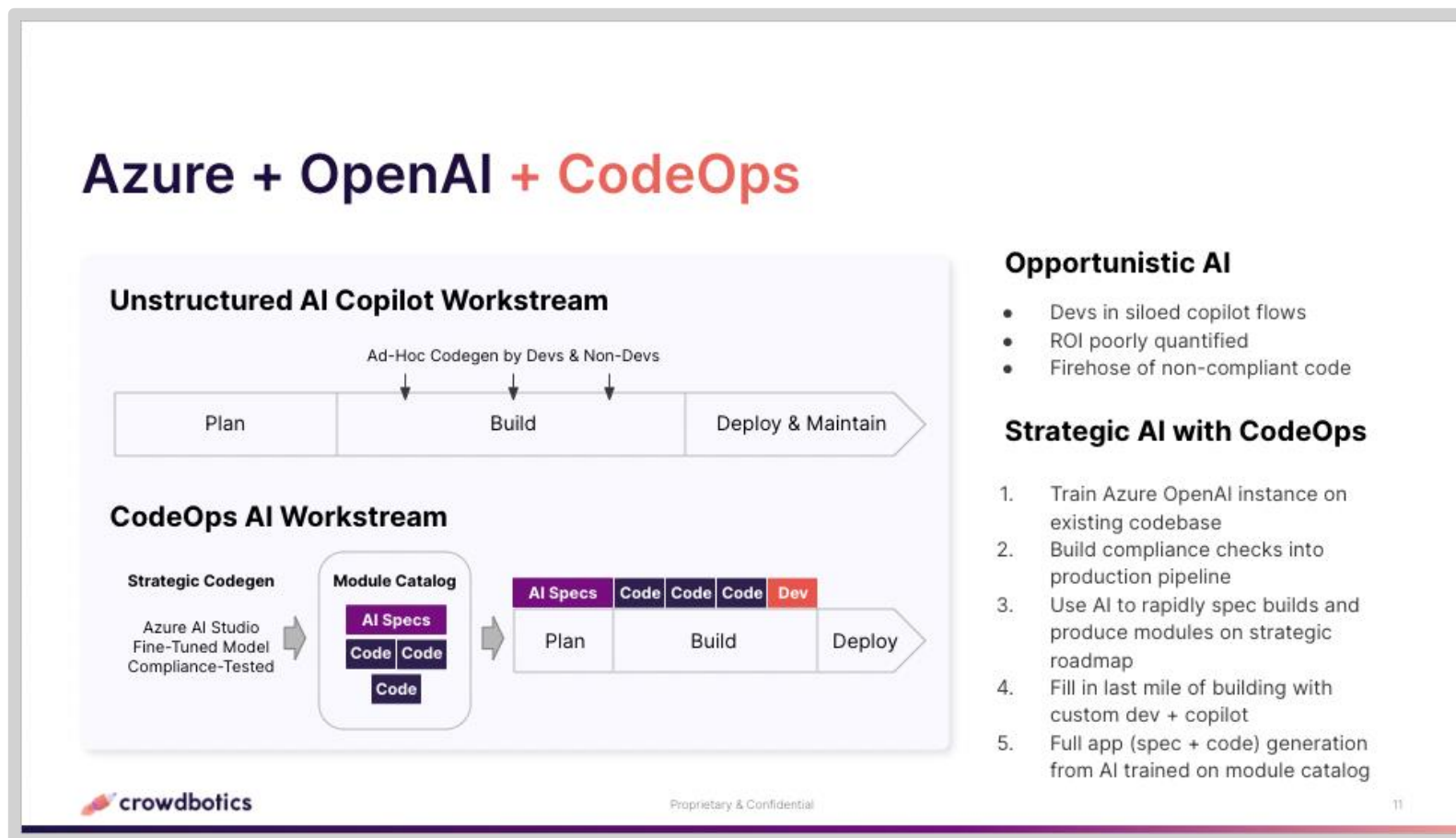


Example: High level impact findings



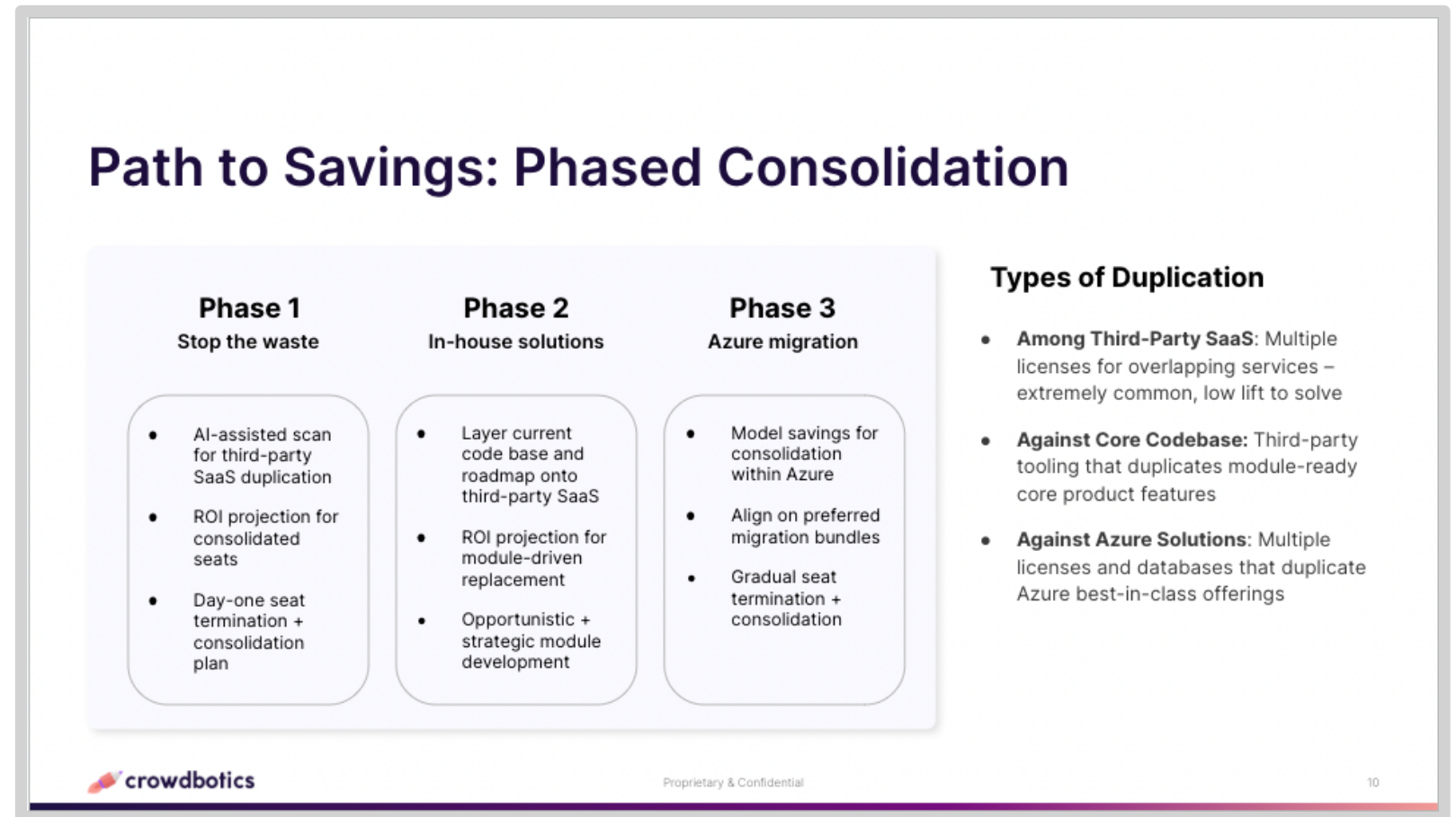
Example: Better Together

For clients interested in an AI driven approach, CodeOps enables a path to strategic and secure use of OpenAI on Azure



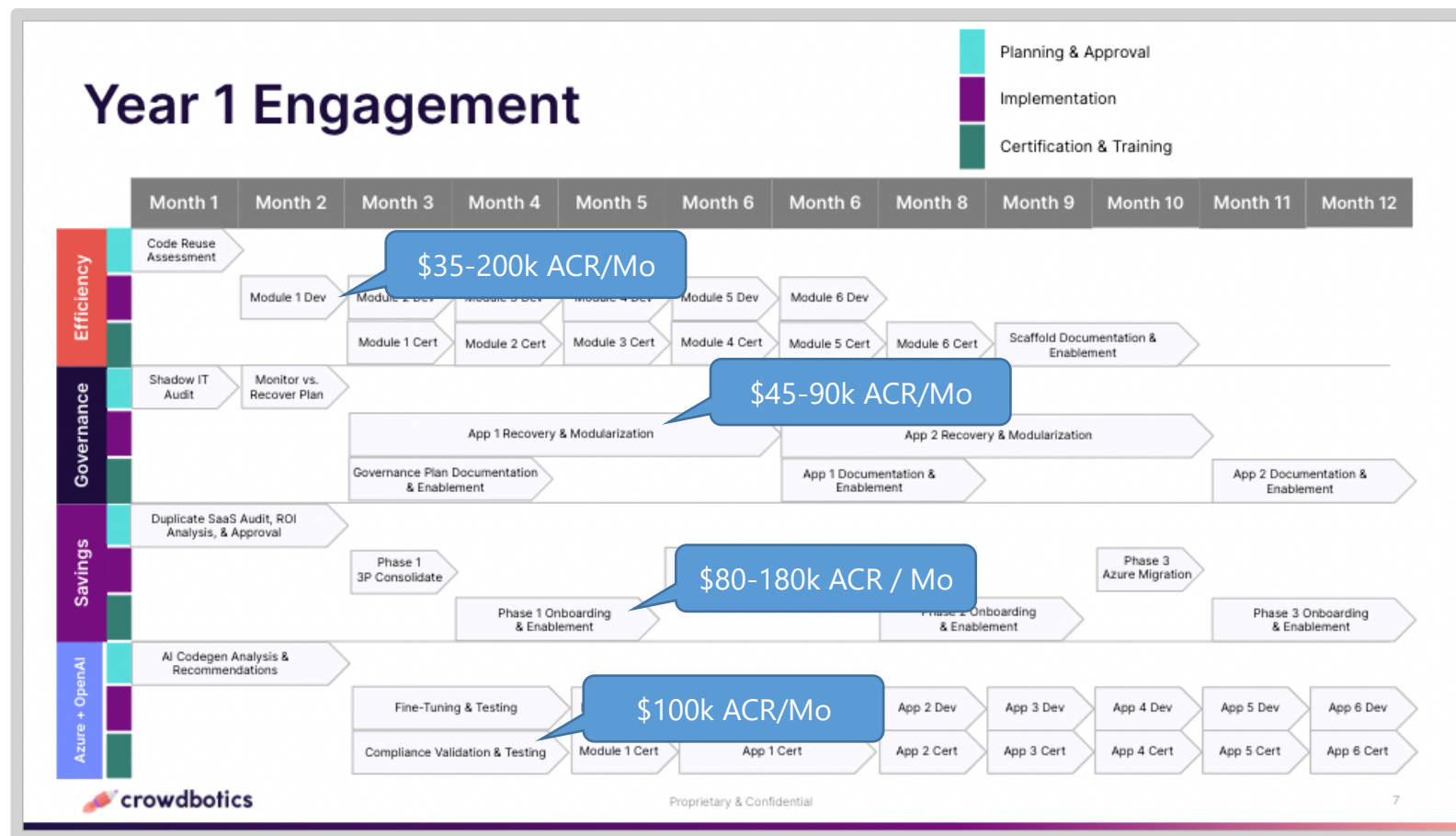
Example: Phased Implementation

While all phases can be done concurrently, the template will offer a phased transformation aligned to the assessment findings, making for an **easier path to yes**.



Example: Implementation Roadmap

Workshop outputs may recommend a **phased implementation**, prioritizing infrastructure and code reuse that will realize the most immediate return

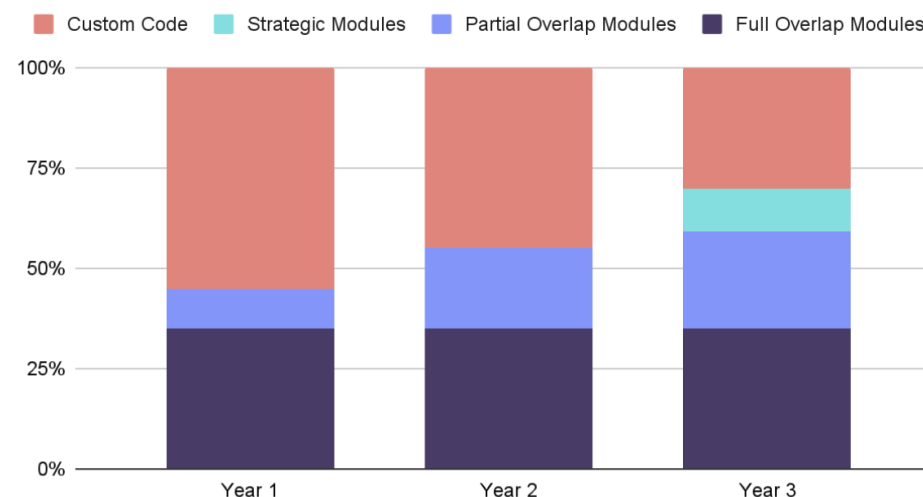


Example: Progressive Savings

Demonstrate **progressive returns** as initial investments in composable architecture expands opportunities for code reuse

Path to Efficiency: Low-to-High Customization

Module vs. Custom Code Distribution



Phased Modularization

- **Phase 1:** High-overlap + low customization module creation
 - Scaffolds, connectors, styles
- **Phase 2:** High- and medium-overlap + medium customization module creation
 - Specs, layouts, components, data models, tests
- **Phase 3:** Strategic roadmap + high customization module creation
 - New project feature overlaps, logical flows

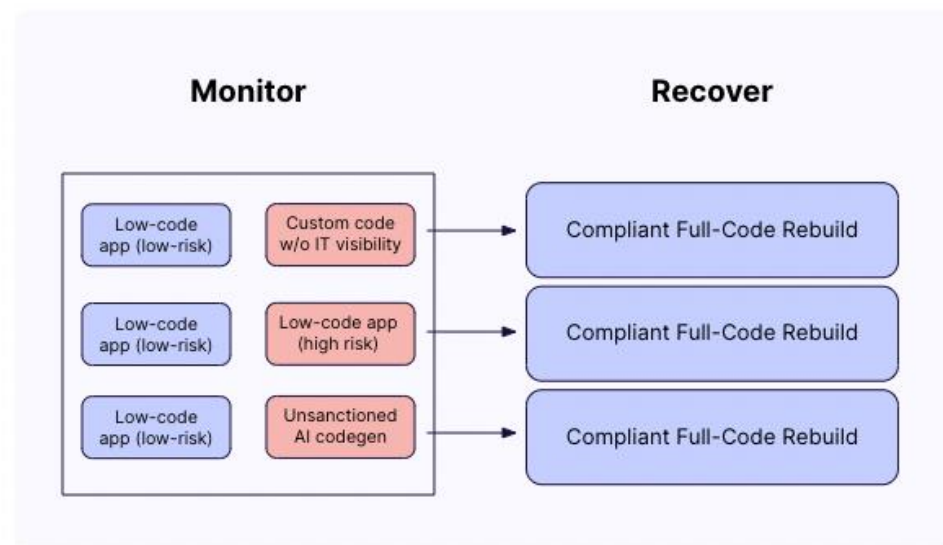


Example: Compliance Risks

Identify and categorize **risk** across all products by analyzing against pre-loaded criteria such as:

- Best Practices
IT involvement, sensitive data, limited control, etc
- Regulatory
SOC2, NIST, etc
- Business / industry specific requirements

Path to Governance: Search > Monitor > Recover



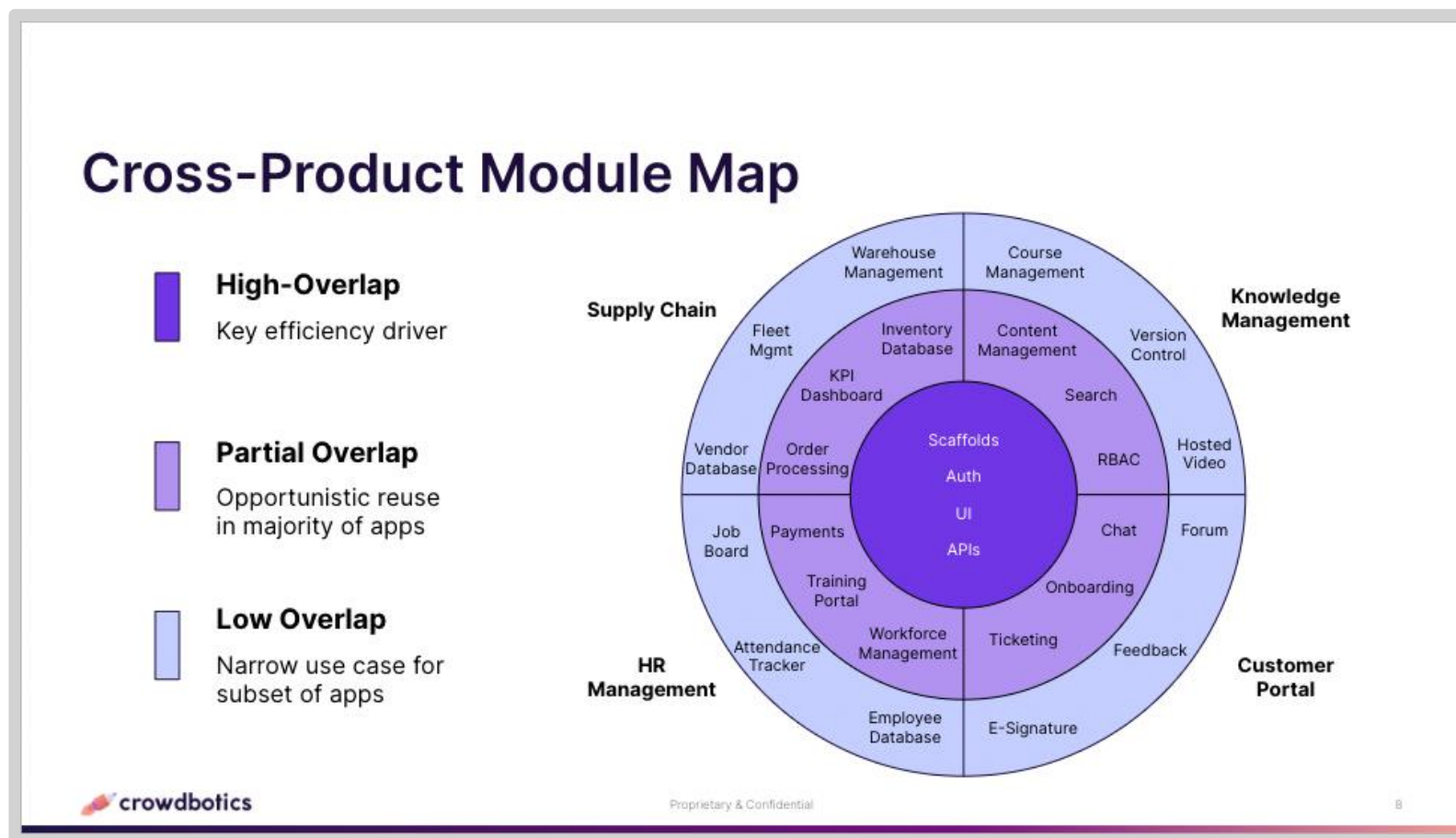
Process + Platform

- **Shadow IT Audit:** AI-assisted assessment of likely IT governance gaps
- **Monitor vs. Recover Plan:**
 - **Monitor** low-risk or highly custom low-code
 - **Recover** high-risk or simple apps
- **Phased Recovery:** Move high-risk low-code into full-code catalog
 - Modularize recovered apps aligned to strategic roadmap



Example: Feature Parity

Identify **code alignment across all apps** within an organization and private or public repositories to identify cost saving and reuse opportunities



Example: AI Codebase Analysis

Demonstrate valuable insights upfront with **AI generated recommendations** for code revisions that will drive increased reuse and modularity.

AI Codebase Analysis

Actual First-Run GPT-4 Output

Feature summaries & descriptions

1. Text preprocessing and feature extraction

The `TweetQualityFeatureExtractor`, `TweetTextAnnotationFeatureExtractor` classes

Documentation suggestions

(See `light-ranker/README.md` and `heavy-ranker/README.md`)

Recommended Modules: Twitter Algorithm

Based on the provided codebase, there are several features that could potentially provide efficiency gains if turned into general-purpose modules. Modularizing these features would enable their use in different parts of the Twitter codebase and potentially be applied to other projects or experiments, improving efficiency, reducing duplication, and encouraging modularity.

1. Text preprocessing and feature extraction

The `TweetQualityFeatureExtractor`, `TweetTextAnnotationFeatureExtractor`, and `TweetAnnotationFeatureExtractor` classes provide various text preprocessing and feature extraction functionalities, which could be useful for other components or projects that require similar features. (Check `TweetQualityFeatureExtractor.java`, `TweetTextAnnotationFeatureExtractor.scala`, and `TweetAnnotationFeatureExtractor.scala`)

2. Machine Learning framework and model serving

The `Ranker` module features a high-performance, machine learning model serving system written in Rust. This could be turned into a general-purpose module that can be reused for other machine learning projects at Twitter. (See `ranker/README.md`)

3. Aggregation framework

The `TimelineDataProcessing` aggregation framework can be turned into a general-purpose module. This would allow other components or projects that require computing aggregate features on provided grouping keys to conveniently use this framework and share functionalities. (See `TimelineDataProcessing/README.md`)

4. Tweet search and candidate generation

The `SearchIndexingService` is responsible for finding, indexing, and ranking tweets in real-time. This system can be modularized and extended to support other candidate generation use cases within Twitter and for other types of content, beyond just tweets. (See `search/README.md` and `search/indexing/README.md`)

5. Tweet ranking and scoring

The `LightRanker` and `HeavyRanker` modules are responsible for ranking candidate tweets and calculating their relevance scores. These can be turned into general-purpose modules that can be reused for other ranking and scoring problems. (See `light-ranker/README.md` and `heavy-ranker/README.md`)

6. Visibility and filtering modules

The `ModerationFeatures` and `Condition` classes implement filtering and visibility logic for tweets and content. These functionalities can be extracted into general-purpose modules that can be reused in various components or projects requiring content filtering and visibility control. (See `visibility/visibility/README.md`, `visibility/visibility/README.md`, `visibility/visibility/README.md`, `visibility/visibility/README.md`, and `visibility/visibility/README.md`)

Recommended Modules: Wealthfront Magellan

If you want to modularize features of the Wealthfront Magellan codebase, consider turning the following aspects into general-purpose modules to gain the most significant efficiency benefits:

1. Core library: The core library is the main module that provides fundamental navigation and handling capabilities. This library is essential for using Magellan in various projects, making it a crucial module to focus on for efficiency gains.

```
def magellanVersion = "2.2.5-beta"
implementation("com.wealthfront:magellan-library:$magellanVersion")
```

2. Optional add-ons: Magellan offers additional modules that extend its functionality. Turning these features into general-purpose modules allows developers to integrate desired components selectively.

```
implementation("com.wealthfront:magellan-support:$magellanVersion")
implementation("com.wealthfront:magellan-rx:$magellanVersion")
implementation("com.wealthfront:magellan-redis:$magellanVersion")
testImplementation("com.wealthfront:magellan-test:$magellanVersion")
// For support of older versions
implementation("com.wealthfront:magellan-legacy:$magellanVersion")
```

3. Navigation: Encapsulating navigation-related Magellan components into a module can improve efficiency in handling and managing navigation. `NavigationTraverser` is an example of such a component:

```
@Provides
@Singleton
NavigationTraverser provideNavigationTraverser(@Expedition root): () {
    return new NavigationTraverser(root);
}
```

4. Dependency Injection: Modules in Magellan, like `AppModule` and `TestAppModule`, set up dependencies for different parts of the application. You can create general-purpose dependency injection modules that handle common dependencies across all projects. Example for `AppModule`:

```
@Module
class AppModule() {
    @Provides
    @Singleton
    RootJourney provideRootJourney(): () {
        return new RootJourney();
    }
    // ...
}
```

5. RxJava support: If you aim to utilize reactive programming in your projects, extracting the RxJava-related components, such as `RxScreen`, can provide additional efficiency when it comes to managing subscriptions.

```
public abstract class RxScreen<V> extends ViewGroup & ScreenView<V> extends ScreenView<V> {
    // ...
}
```

Real code snippets

```
@Module
class AppModule() {
    @Provides
    @Singleton
    RootJourney provideRootJourney(): () {
        return new RootJourney();
    }
    // ...
}
```



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Thank You

