# Iowa Department of Revenue (IDR) Tax Modernization Business Case

Iowa Department of Revenue
April 3, 2019
Project Number: 330051949

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# Table of Contents

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# Gartner, Inc. was chosen to support IDR because it is the world's leading authority on the business of IT with a 39-year history

- *Gartner has worked with numerous federal, state, and local agencies to develop strategies for digital modernization, including enterprise tax and revenue systems.*

- *Gartner has no economic interests in any hardware, software, or system integration vendors, providing unparalleled objectivity in its analyses and eliminating the biases found in other consultancies.*

| Gartner Differentiation | Proof Points |
|---|---|
| **IDR Goals** <br> Guiding IDR to make informed decisions on increasing their ability to meet rising demands. | ▪ Project approach designed to produce supporting consensus. <br> ▪ Project approach designed to link recommendations to objectives which matter to institutional leadership. |
| **Solution** <br> Methodologies based on independent insight in a digital age. | ▪ Tools embody best practices developed across thousands of similar projects. <br> ▪ Reflects Gartner Research's up-to the minute knowledge of the tax processing system market and tax revenue agency trends. |
| **People** <br> Seasoned experts that have mitigated risks and driven success for your peers. | ▪ 20+ Years working with global tax revenue agencies. <br> ▪ 10+ Years working with tax processing systems. <br> ▪ Project team members who understand the unique processes and culture of tax revenue agencies. |
| **Brand** <br> Power of Gartner research, independence and objectivity. | ▪ Largest IT research database (110,000+ reports). <br> ▪ Global community of 1,000+ research analysts, 60% of who are hired with 20+ years of experience. <br> ▪ Only IT and business Consulting firm with an Office of the Ombudsman to ensure independence. |
| **Benchmarking** <br> Ability to measure, optimize and transform. | ▪ The industry's largest IT repository, drawn from 5,000 benchmarks annually. |

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# IDR is responsible for tax administration in the State of Iowa
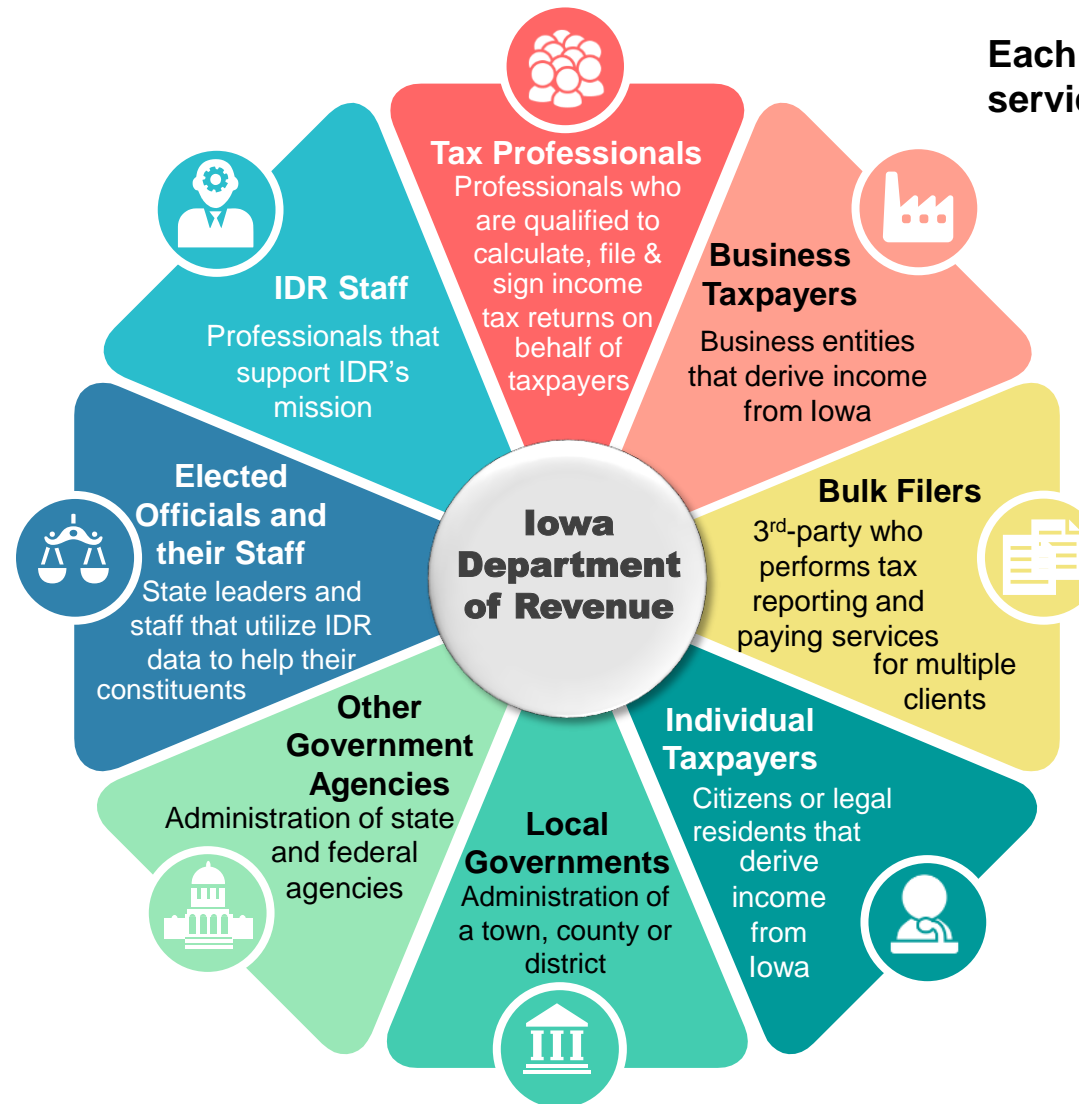
## What does IDR do?

- IDR's mission is to serve Iowans and support state government by collecting all taxes required by law, but no more.

- In FY 2017, IDR collected over $10.1B in taxes and issued $1.2B in refunds to taxpayers resulting in net deposits of $8.9B to the State. In FY 2017, IDR processed over 2.5M tax returns.
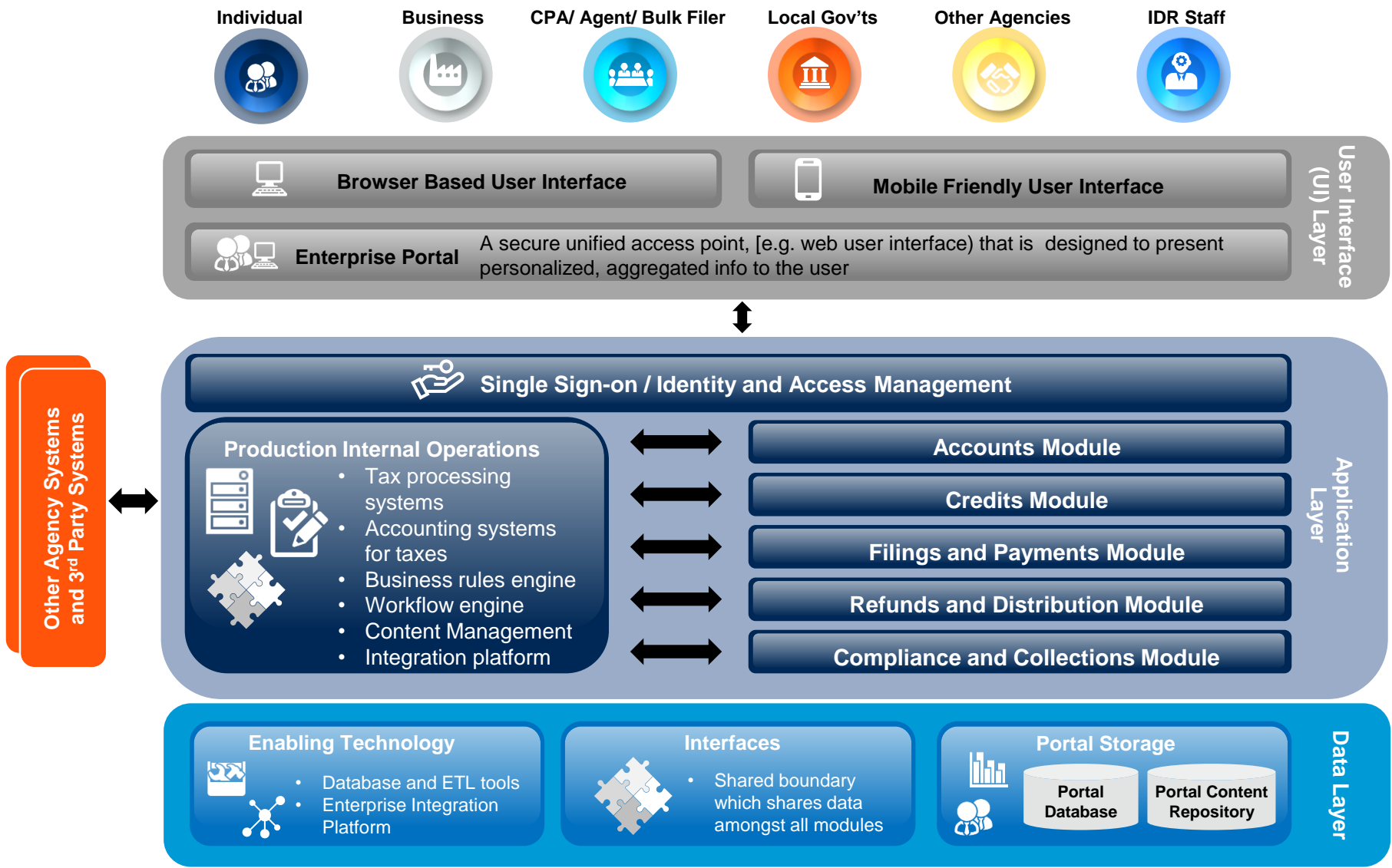
## Recommended Scope for Analysis

- Individual Income Tax / Withholding, Consumer's Use Tax, Fuel Taxes, Corporation Income Tax, Retailer's Use Tax, Franchise Tax, Hotel / Motel Tax, Inheritance Tax / Fiduciary Tax, Sales Tax, Local Option Sales Tax, Cigarette / Tobacco Tax, Replacement Tax, E911 Surcharge Fee, Hazardous Materials Permit Fee, Property Tax, Insurance Premium Tax, Real Estate Transfer Tax, One-Time Fee for New Vehicle Registration, Car Rental Tax & Vehicle Title Surcharge and Miscellaneous other Taxes.

- All tax processes including taxpayer registration, electronic filing (modern eFile and streamlined sales tax), paper filing, receipt and issuance of payments and refunds, taxpayer self-help, processing returns and payments, return resolution, processing refunds and offsets, compliance, appeals, tax credit transfers and claims, local government data exchange, revocations, collections, taxpayer customer service and tax data analysis.

- Collections of debt for other Iowa State Agencies, Counties and Cities.

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# IDR serves eight constituency groups



**Each constituency group requires tailored services to meet their respective needs.**

**Iowa Department of Revenue**

**Tax Professionals**
Professionals who are qualified to calculate, file & sign income tax returns on behalf of taxpayers

**Business Taxpayers**
Business entities that derive income from Iowa

**Bulk Filers**
3rd-party who performs tax reporting and paying services for multiple clients

**Individual Taxpayers**
Citizens or legal residents that derive income from Iowa

**Local Governments**
Administration of a town, county or district

**Other Government Agencies**
Administration of state and federal agencies

**Elected Officials and their Staff**
State leaders and staff that utilize IDR data to help their constituents

**IDR Staff**
Professionals that support IDR's mission

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# Modern tax systems are more streamlined and modular

**Individual**  **Business**  **CPA/ Agent/ Bulk Filer**  **Local Gov'ts**  **Other Agencies**  **IDR Staff**

## User Interface (UI) Layer

**Browser Based User Interface**

**Mobile Friendly User Interface**

**Enterprise Portal** — A secure unified access point, [e.g. web user interface) that is designed to present personalized, aggregated info to the user

## Application Layer

**Single Sign-on / Identity and Access Management**

**Production Internal Operations**
- Tax processing systems
- Accounting systems for taxes
- Business rules engine
- Workflow engine
- Content Management
- Integration platform

**Accounts Module**

**Credits Module**

**Filings and Payments Module**

**Refunds and Distribution Module**

**Compliance and Collections Module**

**Other Agency Systems and 3rd Party Systems**

## Data Layer

**Enabling Technology**
- Database and ETL tools
- Enterprise Integration Platform

**Interfaces**
- Shared boundary which shares data amongst all modules

**Portal Storage**

**Portal Database**

**Portal Content Repository**

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# Gartner used a three-phase approach to develop this business case

**Gap Analysis**

**Current State Analysis**

**Recommendations**

Interviewed business and technical stakeholders and examined IDR's systems and operational processes to determine the current state of operations

Identified the gaps between IDR's current state and recommended practices for a modern integrated tax processing system

Provided solution recommendation and outlined the benefits to major stakeholders after performing options analysis

**Three-phase Approach to Develop Business Case**

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# Current State analysis finds that IDR's constituency groups expect greater ability to manage their tax information and transactions

**Key Expectations from Constituents:**

- Greater transparency into the status of their accounts and balances.

- Ability to perform self-service transactions online.

**Key Findings:**

- Over 24 unique systems support IDR's tax processing and span a variety of technologies; custom-integrated and complex architecture.

    - Four primary systems support the following functions: tax processing, revenue and taxpayer accounting, collections, and compliance.

    - Three systems manage receipt of paper returns and payments with multiple other systems performing a variety of tax functions.

- A limited number of staff have the combination of technical skill and business insight to manage IDR's technology environment.

- Replacing mainframe IT skills is not easy because the pool of external candidates with this kind of expertise is shrinking.

- IDR has complex processes that include substantial manual intervention due to the ad-hoc nature of application development over the years.

- Batch file transfers are used to facilitate the flow of information across systems which creates redundancies and inconsistencies.

- The investment, time, and resources required to transform IDR's technology to meet the evolving needs of constituents is significant.

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# IDR's systems have difficulty in easily integrating new functionality
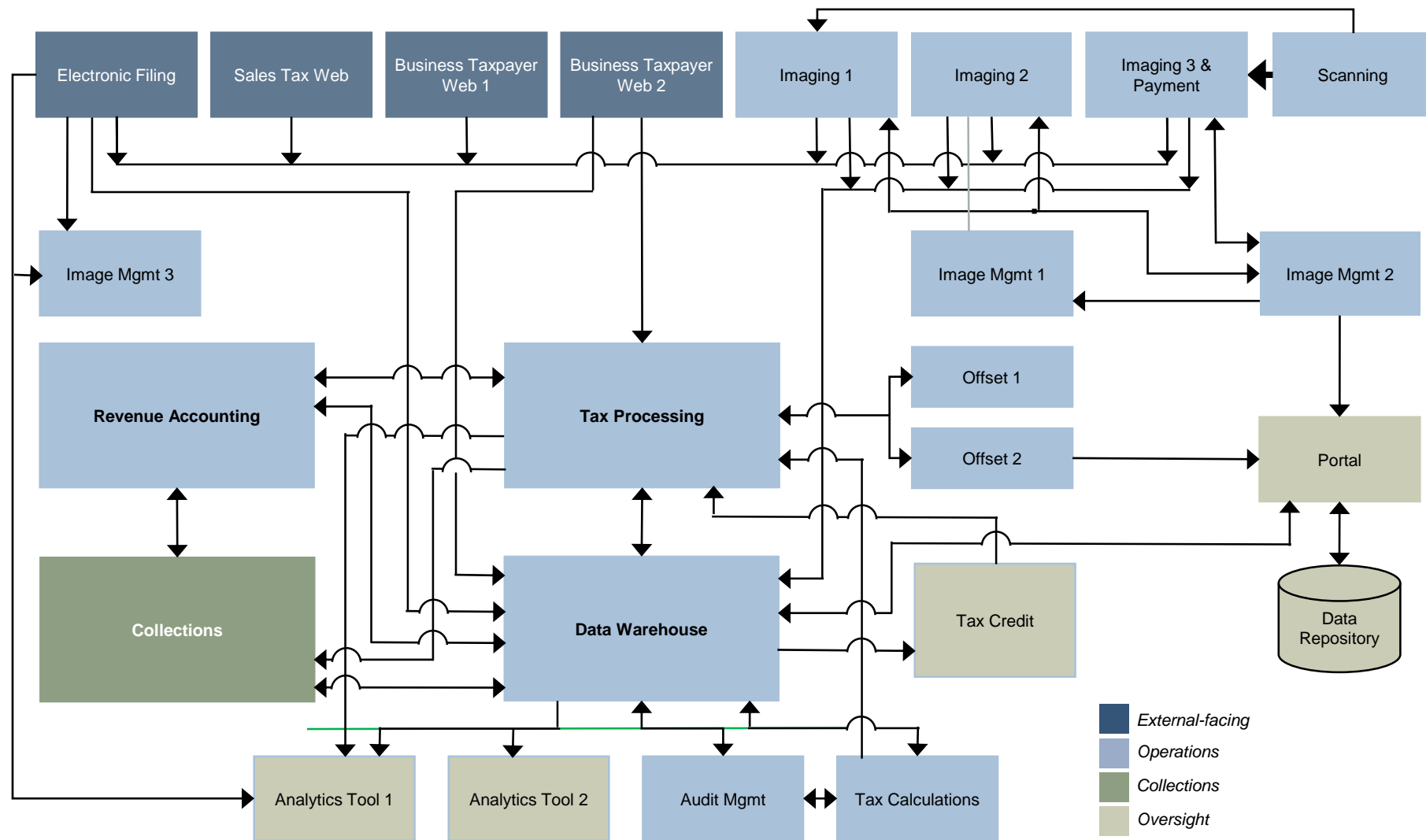
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# Gap analysis identified that IDR wasn't operating at the desired speed, efficiency, and effectiveness

*Gartner identified gaps between IDR's current and desired states related to the ability to administer taxes with speed, efficiency, and effectiveness.*

**Key Findings:**

▪ Current IDR systems hinder staff's ability to efficiently manage the tax process. Also, taxpayer information is not managed holistically.

▪ The systems lack functionality, e.g., outward facing, secure taxpayer portal allowing self-help and access to account information.

▪ Primary systems are not scalable, or configurable. It is time-consuming and costly to implement system updates or integrate new functionality.

▪ Complex technology architecture introduces risks when making changes or additions to functionality.

▪ Core processing system updates are executed through batch processes on a daily, weekly, or quarterly basis.

▪ Few technical experts have an in-depth understanding of the existing technical environment.

▪ The current technology encourages IDR divisions to operate in "silos" that limit the effectiveness of IDR in managing the overall tax process.

▪ IDR is not currently in crisis, but has experienced "near misses" recently due to the instability and inflexibility of its core tax systems.
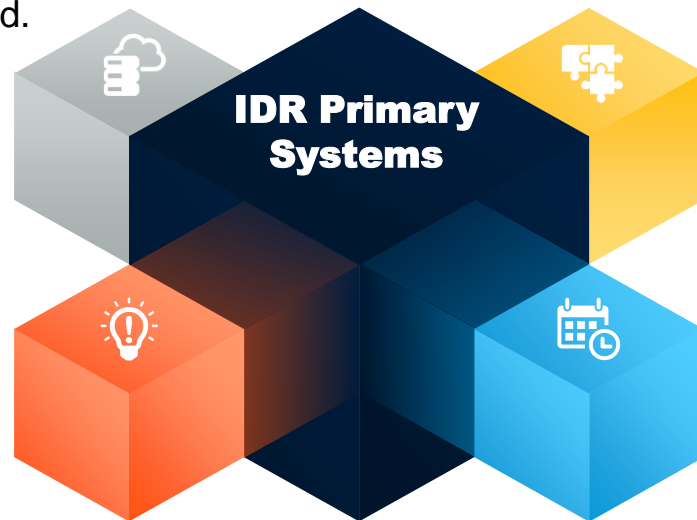
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# IDR Technology Findings

## Complex Architecture

- Multiple technologies both modern and outdated are used.
- Core and periphery systems were combined ad-hoc.

## Integration Difficulty

- Business and processing logic are hard-coded together.
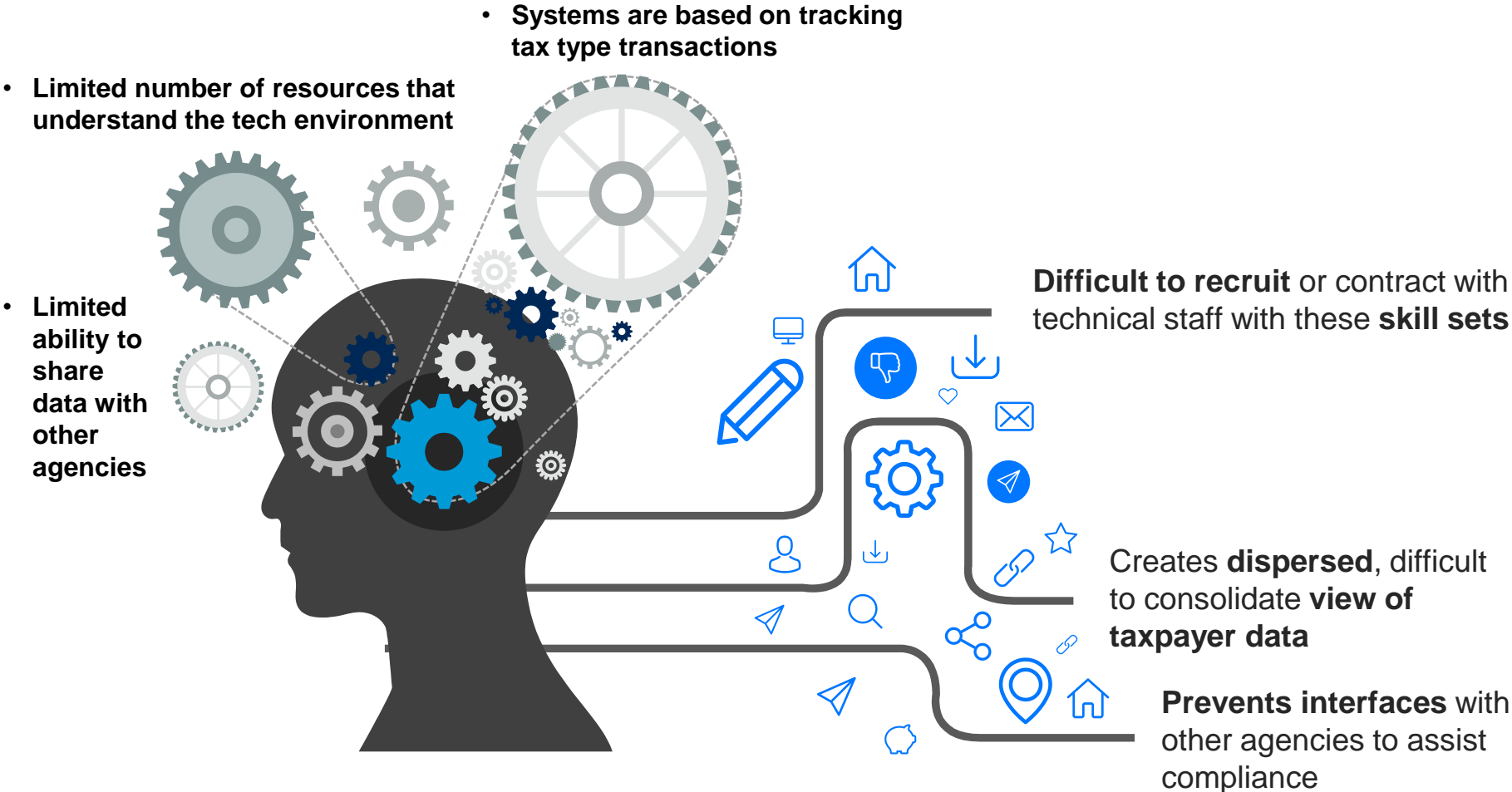- Functionality dispersed over multiple systems.
- Scarce documentation.

**IDR Primary Systems**

## Lack of Functionality

- Lack of a full-featured taxpayer portal with access to historical data.
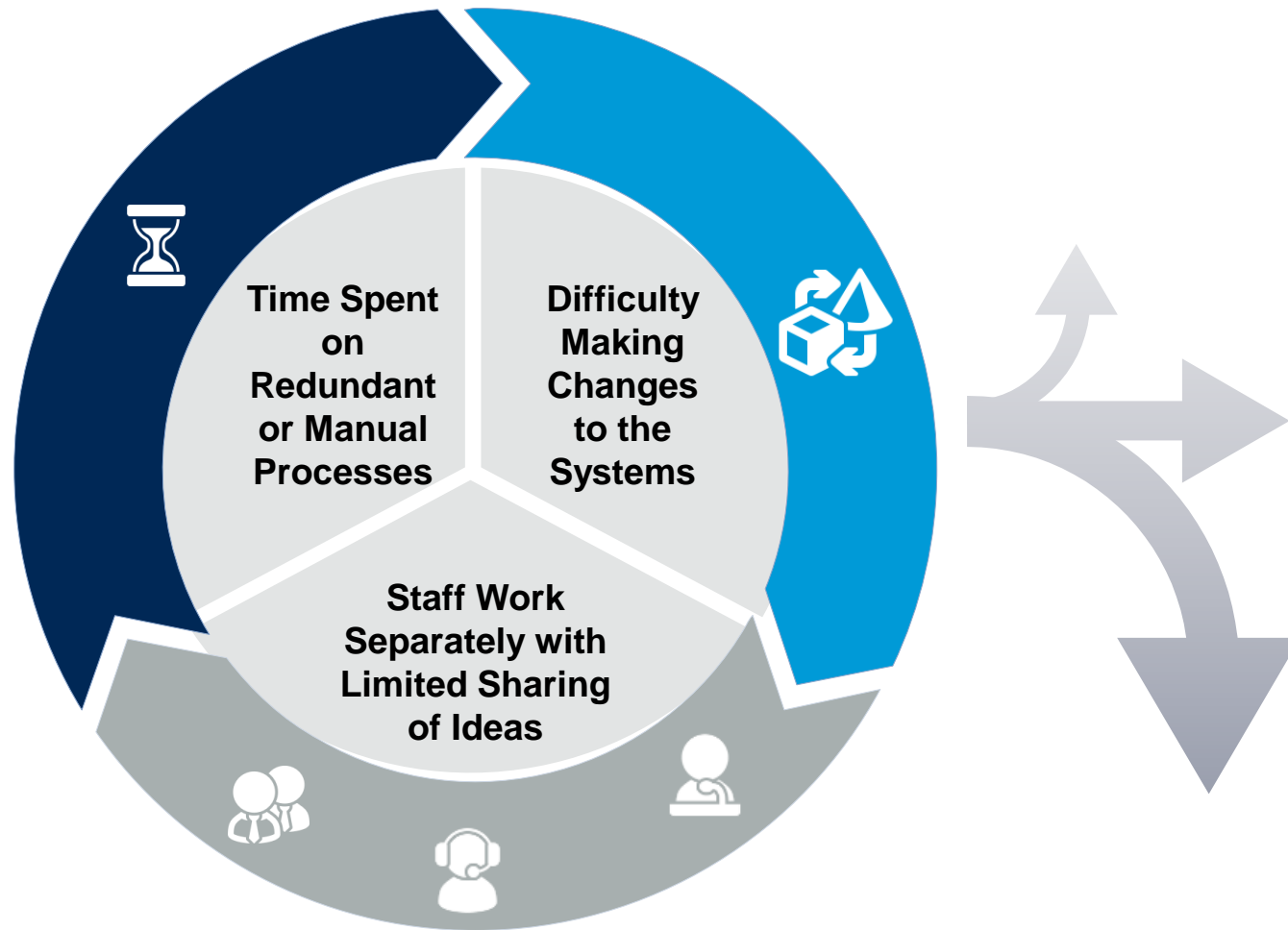- Multiple manual processes exist as work-arounds.

## Data Integrity

- Data updated to core system at different times by different feeder systems.
- Manual creation of reports.

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# IDR Organizational Findings



- **Systems are based on tracking tax type transactions**

- **Limited number of resources that understand the tech environment**

- **Limited ability to share data with other agencies**

**Difficult to recruit** or contract with technical staff with these **skill sets**

Creates **dispersed**, difficult to consolidate **view of taxpayer data**

**Prevents interfaces** with other agencies to assist compliance

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# IDR Process Findings



**Time Spent on Redundant or Manual Processes**

**Difficulty Making Changes to the Systems**

**Staff Work Separately with Limited Sharing of Ideas**
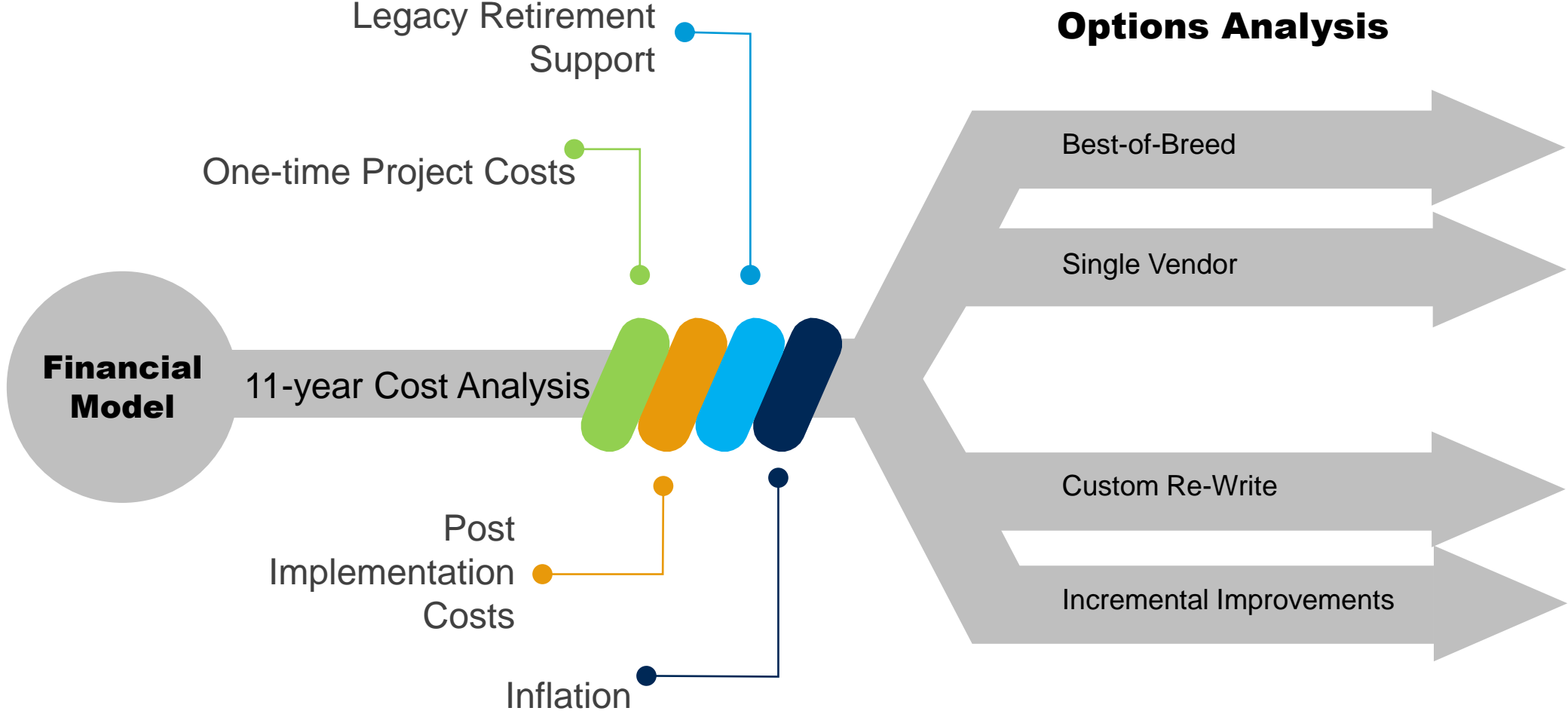
## Operational Impact

- **Manual intervention** and duplicative work-around processes are utilized.
- Difficulty in changing existing systems **delay potential improvements** to the tax process.
  - Integration is technically difficult within the current legacy systems.
  - Business logic is embedded in system code which further encourages manual intervention.
- **Best practices** and knowledge **are not easily shared** across the operational and technical groups.
  - Operational groups are prevented from reviewing and improving processes from an end-to-end point of view.
  - Opportunities to streamline processes are inhibited.

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# Gartner conducted a financial analysis of four options



**Options Analysis**

Legacy Retirement Support

One-time Project Costs

Financial Model

11-year Cost Analysis

Post Implementation Costs

Inflation

Best-of-Breed

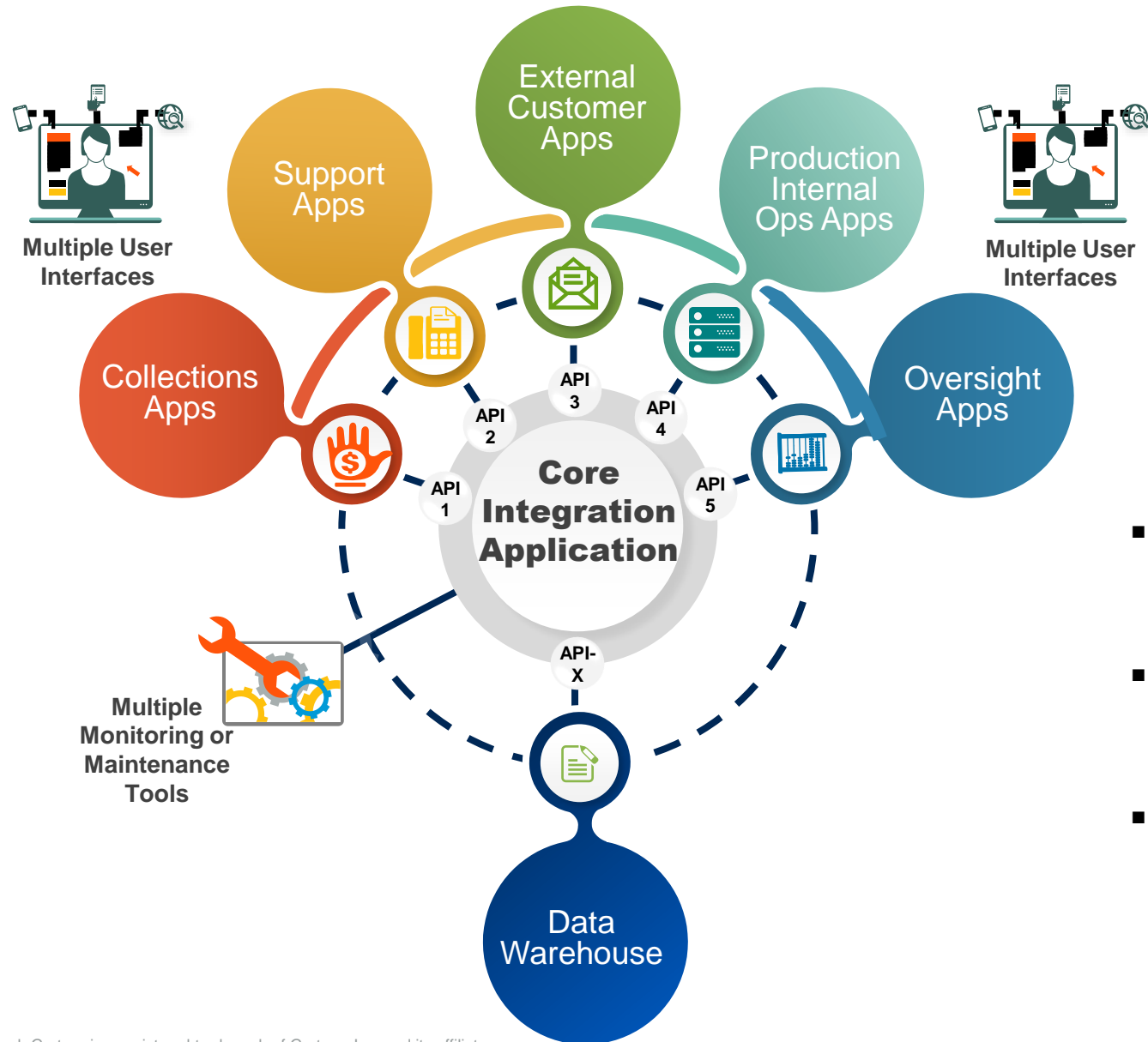Single Vendor

Custom Re-Write

Incremental Improvements

*The 11-year model assumes one year for procurement, five years for system implementation, and five years of post-integration maintenance and support. Gartner then analyzed the cash flows over 11 fiscal years for all options.*
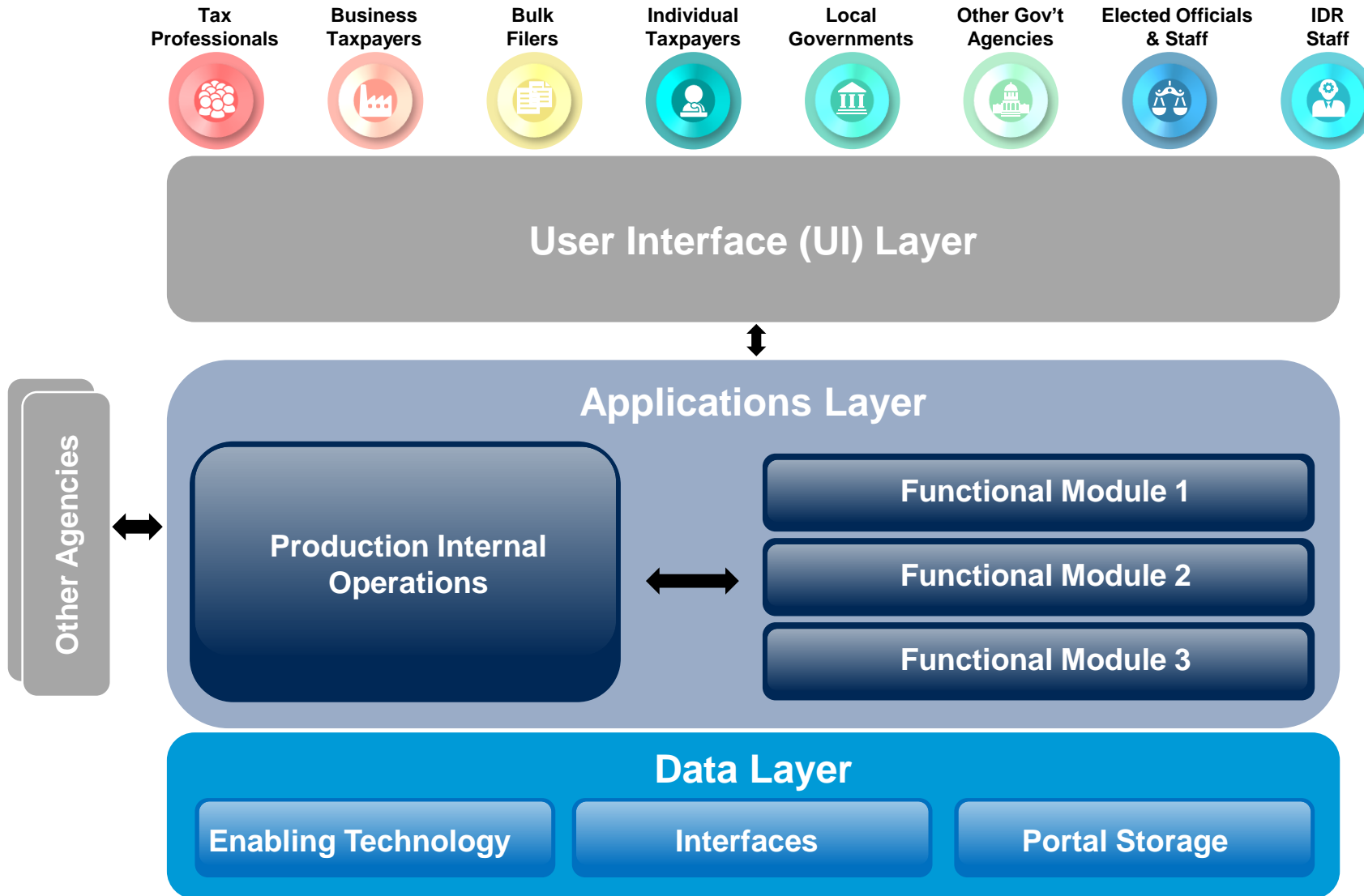
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# Best-of-Breed Option

- The Best-of-Breed approach creates an integrated apps model with different technical solutions/vendors for each function.

- Provides deeper insight into particular business or IT functionality.

- Provides multiple point solutions, thus increasing flexibility to customize technical support.

**Multiple User Interfaces**

**Multiple User Interfaces**

Support Apps

External Customer Apps

Production Internal Ops Apps

Collections Apps

Oversight Apps

API 1

API 2

API 3

API 4

API 5

**Core Integration Application**

API-X

**Multiple Monitoring or Maintenance Tools**

Data Warehouse

- Negative consequences are cost, complexity, and lack of built-in integration.

- Does not prioritize integration, user interface, tools, or monitoring criteria.

- Can lead to challenges with integration, configuration, consolidation and overlapping features.

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# Single Vendor Option



**Tax Professionals**
**Business Taxpayers**
**Bulk Filers**
**Individual Taxpayers**
**Local Governments**
**Other Gov't Agencies**
**Elected Officials & Staff**
**IDR Staff**

**User Interface (UI) Layer**

**Other Agencies**

**Applications Layer**

**Production Internal Operations**

**Functional Module 1**

**Functional Module 2**

**Functional Module 3**

**Data Layer**

**Enabling Technology**

**Interfaces**

**Portal Storage**

- Single vendor solutions are ready-made, available for licensing to any organization.

- Favorable when the vendor has a suite of standard, commoditized functional features.

- There are three main business benefits expected from a single vendor solution.
  - Improved operational efficiency.
  - Greater insight and agility.
  - Reduced risk.

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# Custom Re-Write Option

Custom Re-Write models provide a high degree of control and alignment to existing business processes.
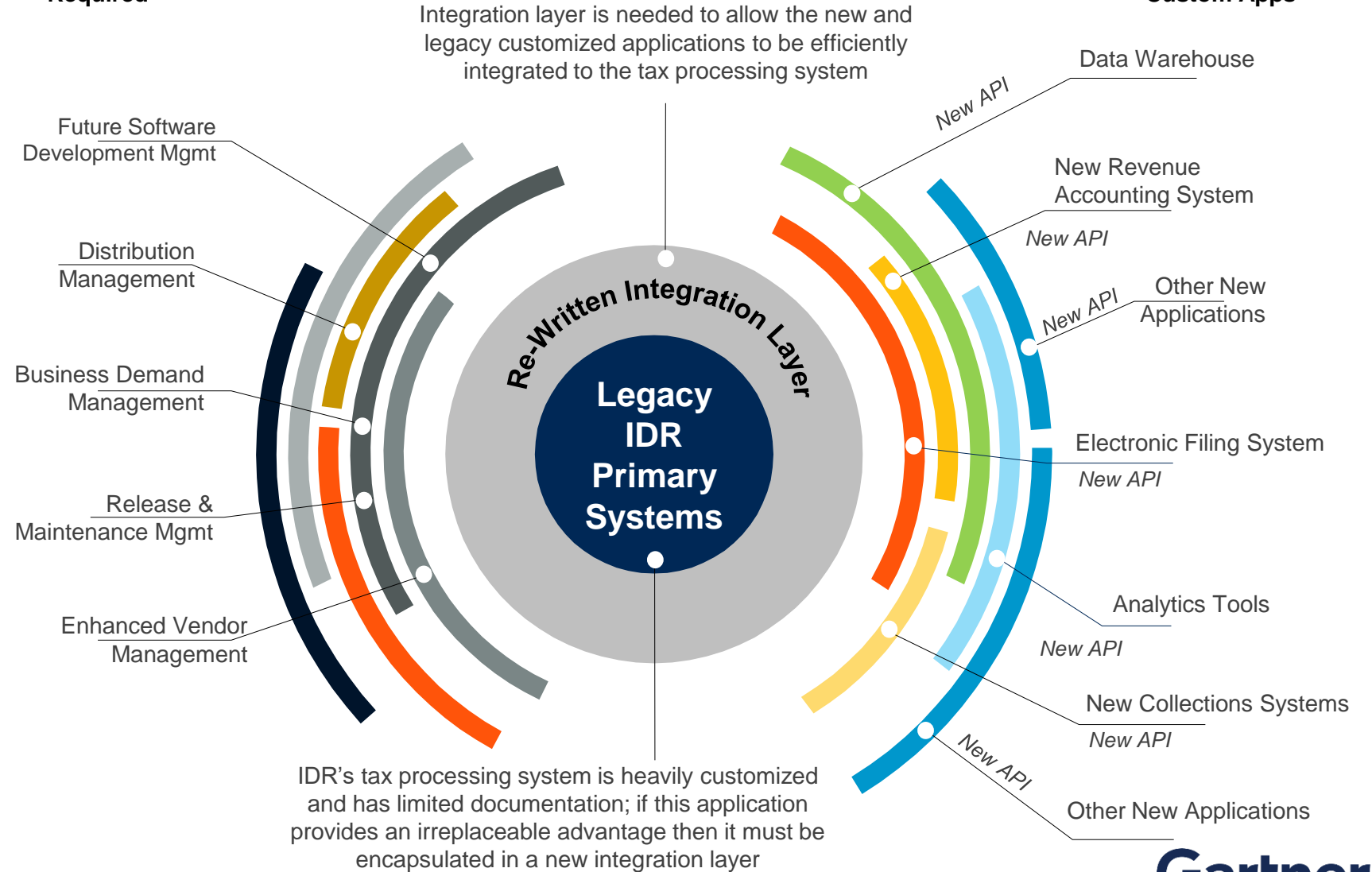
These models also tend to underestimate maintenance and support costs.

This model will require IDR to:

- Keep up with technology trends and develop a product roadmap to avoid technological obsolescence.
- Tightly manage knowledge capital.
- Mitigate risks of high costs due to longer implementation times.
- Singlehandedly address quality problems that may arise.

**New Services or Capabilities Required**

**Sample New or Legacy Custom Apps**

Integration layer is needed to allow the new and legacy customized applications to be efficiently integrated to the tax processing system

Future Software Development Mgmt

Distribution Management

Business Demand Management

Release & Maintenance Mgmt

Enhanced Vendor Management

**Re-Written Integration Layer**

**Legacy IDR Primary Systems**

Data Warehouse — New API

New Revenue Accounting System — New API

Other New Applications — New API

Electronic Filing System — New API

Analytics Tools — New API

New Collections Systems — New API

Other New Applications — New API

IDR's tax processing system is heavily customized and has limited documentation; if this application provides an irreplaceable advantage then it must be encapsulated in a new integration layer

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# Gartner recommends IDR select a single vendor commercial-off-the-shelf cloud-based solution
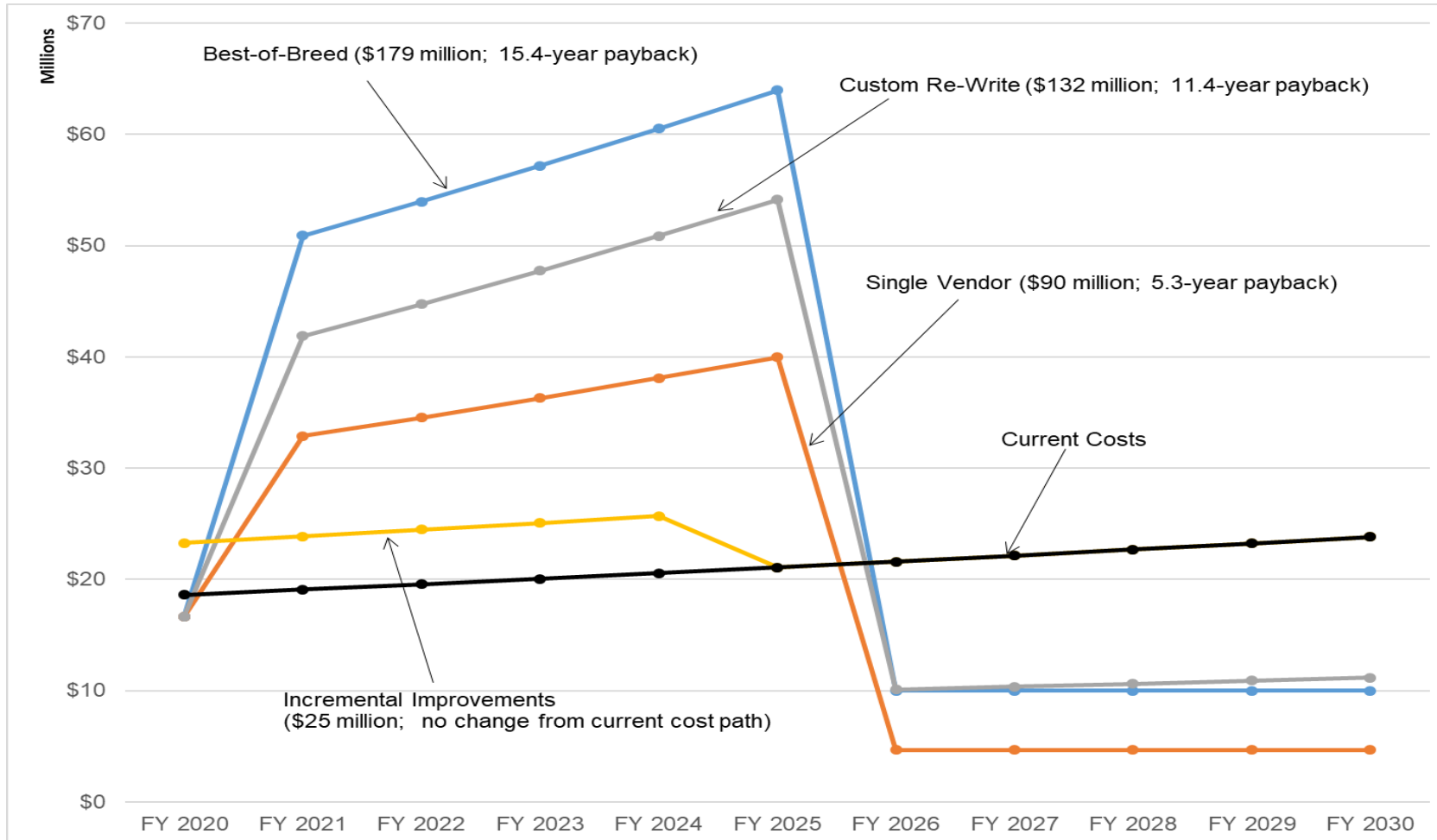
This new modernized tax system supports the use of modular technology.

- Gartner's recommendation is supported by a detailed assessment of the tax system marketplace and a thorough cost analysis.

- The single vendor option is also expected to generate the lowest ongoing operations and maintenance costs after project implementation, starting in FY 2026.

- Another characteristic of the recommended option is a 5.3-year payback period, the shortest of all options.

## Financial Analysis of Tax System Modernization

| Cost Category | Option 1 Best of Breed | Option 2 Single Vendor | Option 3 IDR Custom Rewrite | Option 4 Incremental Improvements |
|---|---|---|---|---|
| **One-Time Project Costs (1-year prep; 5-year implementation)** | **$ 179,435,475** | **$ 89,678,236** | **$ 131,937,727** | **$ 24,590,156** |
| Hardware Purchase/Platform as a Service (Paas) Fees | $ 387,917 | $ 1,037,891 | $ 387,917 | $ 378,456 |
| Software Purchase/License or Software as a Service (Saas) Fees | $ 7,277,755 | $ 2,476,204 | $ 1,077,547 | $ - |
| IDR Staff (salaries & benefits) | $ 4,655,005 | $ 3,491,253 | $ 6,400,631 | $ 6,812,202 |
| OCIO and Vendor IT Contractors | $ 12,293,021 | $ 3,995,906 | $ 15,848,927 | $ 13,876,707 |
| System Integrator | $ 123,917,945 | $ 59,480,613 | $ 83,644,613 | $ - |
| Management Support and Program Assurance/IV&V | $ 6,637,737 | $ 6,637,737 | $ 6,637,737 | $ - |
| Agency Facilities | $ - | $ - | $ 538,774 | $ - |
| Training and Outreach | $ 906,217 | $ 906,217 | $ 237,060 | $ 315,380 |
| Contingency of 15% | $ 23,359,880 | $ 11,652,413 | $ 17,164,521 | $ 3,207,412 |
| **Post Implementation Costs (5 years)** | **$ 80,775,339** | **$ 37,957,842** | **$ 81,886,380** | **$ 232,427,325** |
| Hardware Purchase/Platform as a Service (Paas) Fees | $ - | $ - | $ 6,211,201 | $ 16,529,707 |
| Software Purchase/License or Software as a Service (Saas) Fees | $ 63,363,141 | $ 21,558,854 | $ - | $ 28,736,939 |
| IDR Staff (salaries & benefits) | $ 5,066,049 | $ 5,066,049 | $ 3,039,629 | $ 6,741,072 |
| OCIO and Vendor IT Contractors | $ 10,319,730 | $ 10,319,730 | $ 20,639,459 | $ 110,233,015 |
| OCIO Utility Charges | $ - | $ - | $ 45,241,357 | $ 60,199,819 |
| Agency Facilities | $ - | $ - | $ 4,690,786 | $ 6,241,733 |
| Training and other | $ 2,026,420 | $ 1,013,210 | $ 2,063,946 | $ 3,745,040 |
| **O&M Legacy Retirement Support (5-year implementation)** | **$ 95,449,938** | **$ 95,449,938** | **$ 95,449,938** | **N/A** |
| IDR Staff (salaries & benefits) | $ 3,449,378 | $ 3,449,378 | $ 3,449,378 | |
| OCIO and Vendor IT Contractors | $ 56,405,766 | $ 56,405,766 | $ 56,405,766 | |
| OCIO Utility Charges | $ 30,803,992 | $ 30,803,992 | $ 30,803,992 | |
| Failover and Staging Hardware | $ 1,596,934 | $ 1,596,934 | $ 1,596,934 | |
| Agency Facilities | $ 3,193,868 | $ 3,193,868 | $ 3,193,868 | |
| **Total Cost (with 2.5% inflation)** | **$ 355,660,752** | **$ 223,086,016** | **$ 309,274,045** | **$ 257,017,481** |
| ROI (cost savings compared to incremental improvements - Option 4) | -28% | 15% | -17% | |

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# IDR will realize significant cost savings during steady state operations, years 7 through 11

**Options Cost Comparison: Total Project Cost Over Five Years and Payback Period**



Best-of-Breed ($179 million; 15.4-year payback)

Custom Re-Write ($132 million; 11.4-year payback)

Single Vendor ($90 million; 5.3-year payback)

Current Costs

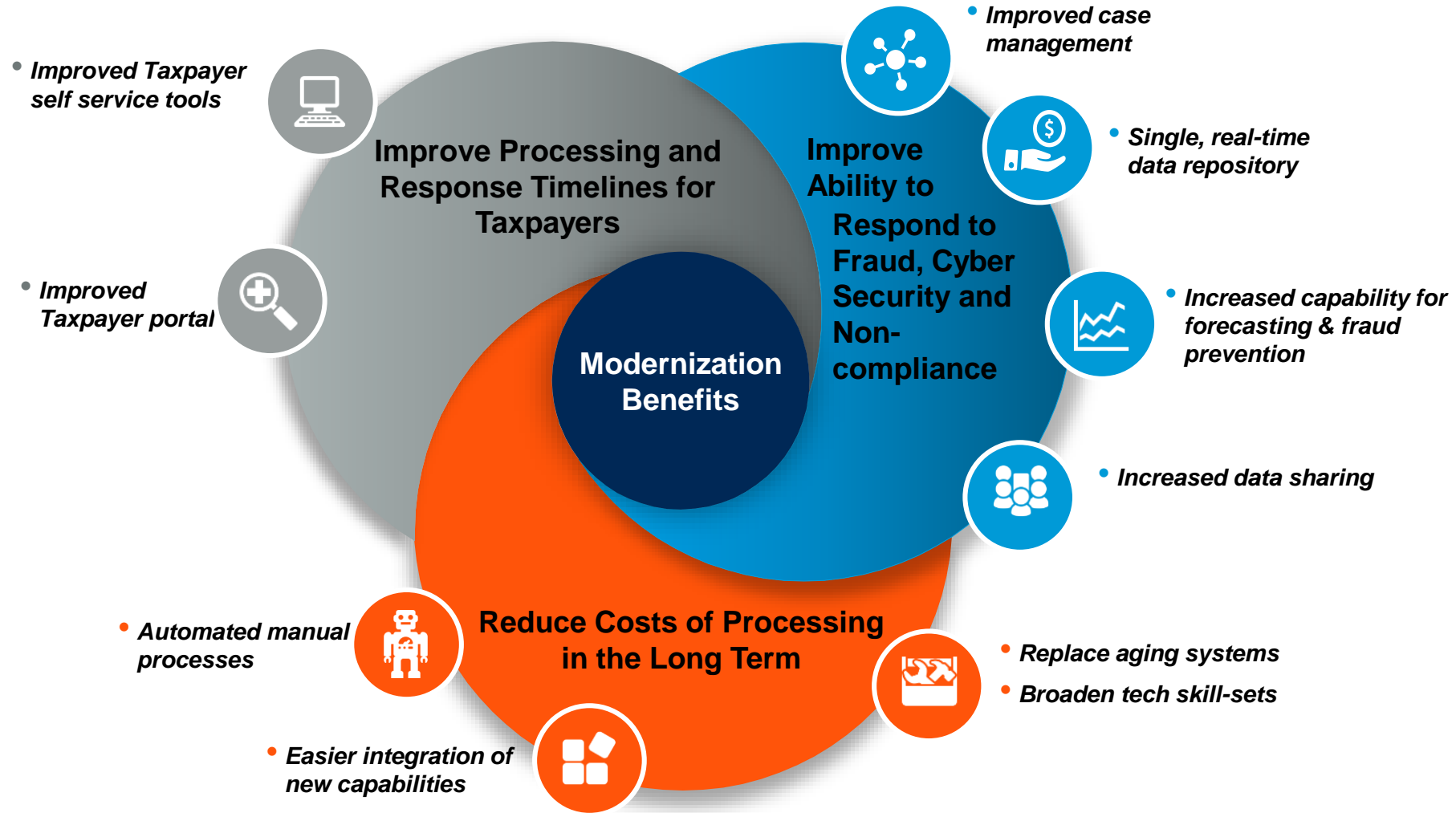Incremental Improvements ($25 million; no change from current cost path)

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# Estimated Investment Request for Tax Modernization, by Fiscal Year

- An initial investment of approximately $90M over a 5-year period will be required.

- This investment will be used to procure and implement a modern integrated tax processing system from a single vendor.

- The estimated investment allocation by fiscal year is depicted in this table.

| Fiscal Year | Amount |
|---|---|
| FY 2020 (Procurement) | $1.7 M |
| FY 2021 | $16.8M |
| FY 2022 | $17.2M |
| FY 2023 | $17.6M |
| FY 2024 | $18.1M |
| FY 2025 | $18.5M |
| TOTAL | $89.9M |

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# Modernization provides 3 major types of key benefits

**Improved Taxpayer self service tools**

**Improved Taxpayer portal**

**Improve Processing and Response Timelines for Taxpayers**

**Improve Ability to Respond to Fraud, Cyber Security and Non-compliance**

**Modernization Benefits**

**Improved case management**

**Single, real-time data repository**

**Increased capability for forecasting & fraud prevention**

**Increased data sharing**

**Automated manual processes**

**Reduce Costs of Processing in the Long Term**

**Replace aging systems**

**Broaden tech skill-sets**

**Easier integration of new capabilities**

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# Taxpayers will benefit as their interactions will be of higher quality

| IDR Constituent | What do they gain from an integrated tax system? |
|---|---|
| **Tax Professionals** | ▪ Consolidated data will allow an easier way to analyze and review all information in one place to gain a comprehensive understanding of each client's tax situation.<br>▪ Single tax portal will increase efficiency. Taxpayers will more easily authorize information access and decision making by tax professionals, reducing processing and correspondence delays. |
| **Business/ Individual Taxpayers** | ▪ Ability to see in one place all permits, obligations, timelines for payments, correspondence and answers to questions.<br>▪ Easy and timely interactions with IDR will lead to improved compliance.<br>▪ Improved correspondence management will enable IDR to better track and manage interactions. |
| **Bulk Filers** | ▪ Special forms with pre-determined schema and electronic filing instructions will support quicker uploading and more efficient interactions with IDR via a customized portal. |
| **Local Governments/ Government Agencies** | ▪ More precise, timely collaboration for the administration of various taxes. |
| **Elected Officials and Their Staff** | ▪ Availability of better quality data for analysis purposes will facilitate timelier input into budget or other discussions with the legislature. |

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# Next Steps

Gartner recommends that IDR work with OCIO to develop a technology Request for Proposal (RFP) to accurately assess the vendor marketplace and procure the most appropriate single vendor solution for a modern integrated tax system. The RFP will start the document trail that will lead to a legal contract.

- Gartner has identified three key steps in structuring a successful RFP process.

  - **Architect a viable solution**: In this step IDR and OCIO will document business context, product functional and nonfunctional requirements and any existing constraints so that vendors can design a viable solution with suitable delivery model and optimal pricing.

  - **Schedule and prioritize activities**: The execution of this step will provide RFP recipients a list of activities, anticipated timelines and evaluation criteria so that they can prioritize and assemble their best team to create a response and showcase their abilities.

  - **Respond in a consistent manner**: In this step IDR and OCIO will develop provider response templates to allow for effective comparison of submitted proposals.

To flawlessly execute the steps outlined above, Gartner advises that IDR complete an **Organizational Readiness Assessment**. Its purpose is:

- Assess the preparedness of IDR to effectively execute the modernization project.

- Create a roadmap to address any areas in need of further attention.

This effort includes analysis of IDR's vision and strategy, organization and skills, governance, project management, systems and technology support, and data quality.

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