FINEOS

FINEOS Position Paper:
Why Purpose-Built Platform Architecture Supports the Future of Employee Benefits

Executive Summary

The employee benefits industry has gone through immense change in the last two decades, driven by regulatory, political, economic, and social evolution. Recent global medical and sociopolitical events have put a fine point on the need for flexibility and resiliency in operating models and longer-term business models.

The expansion of product portfolios, distribution and service channels, and the need to support new employer business needs, such as absence management, require process change and updating of long-entrenched core systems. The challenge to updating these incumbent systems is that they carry a lot of unique industry intellectual property involving product, process, and regulatory requirements that is not easily replicated or transferable without a heavy lift.

The employee benefits industry has an imperative need for digital-enabled, fast, efficient core systems that meet its unique needs today, and in the future. Many technologists believe APIs and microservices supporting a best-of-breed network are the answer. While they are useful tools, there is a great need for a deeper understanding of the employee benefits business context, and the enterprise architecture required to maintain that business model.

At FINEOS, we believe insurance core systems need to be deployed as purpose-built end-to-end solutions. External digital engagement systems (portals, email/SMS processes, APIs) need to be closely connected to the core platform and monitored for errors across the process. This does not require returning to the hard-to-integrate monolithic systems of the past: success in today's digital world requires a purpose-built core platform with insurance DNA.

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Defining Purpose-Built

A purpose-built platform serves a broad functional need or a market-specific end-to-end process such as ERP or core insurance processing. It differs from generic workflow and process management tools as it is structured toward the given function/industry (example: employee benefits), contains specific intellectual property in the design, and provides out-of-the-box capabilities. This greatly reduces effort and complexity when deploying new products and processes compared to a generic platform or one that has been rehabilitated from a different insurance segment such as P&C.

The FINEOS Platform is the ONLY modern core insurance platform purpose-built for employee benefits. It provides end-to-end processing using modular components that live on the platform and interface with other systems as needed. These can be enterprise systems like a general ledger that live outside the core insurance lifecycle; ecosystem partners that support product partners, distribution, or digital service; or existing core system components that must be incorporated until they can be replaced. The purpose-built FINEOS Platform incorporates insurance DNA at its core, orchestrating the insurance lifecycle including the current state of any transaction internally and externally, which is critical to a frictionless end-to-end process.

Unlike a best-of-breed target architecture which seeks to optimize each component function and connect them together using external workflow and orchestration tools, the purpose-built platform architecture optimizes the end-to-end process (i.e., business experience). It uses the power of the platform components and capabilities, only integrating external best-of-breed or legacy components when the situation requires.

A purpose-built platform promotes flexibility, resiliency and speed to market with a high-coherence platform architecture and a shared information architecture.

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The business user gains an optimized, frictionless user experience, streamlined access to ecosystem partners, and the ability to incorporate existing systems and processes to support today's work while engaging in a long-term digital transformation process. The shared UX and workflow also enable a more cross-functional operation with the ability to shift resources across the lifecycle functions more easily than a collection of disparate systems allows. A truly shared workflow across the employee benefits lifecycle improves accuracy, enhances business resiliency, elevates UX and satisfaction.

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Architecture Matters in a SaaS World

Insurance carrier technologists have struggled with core system target application/technical architecture for decades, moving from homegrown monolithic systems to monolithic vendor solutions to best-of-breed heterogenous systems.

Today there is a desire among technologists to move to microservice architectures as a technical best practice. Insurance carrier business leaders haven't changed their need for faster products to markets; for speed and flexibility of service for their customers; and for efficiency to reduce cost and enable competitive pricing.
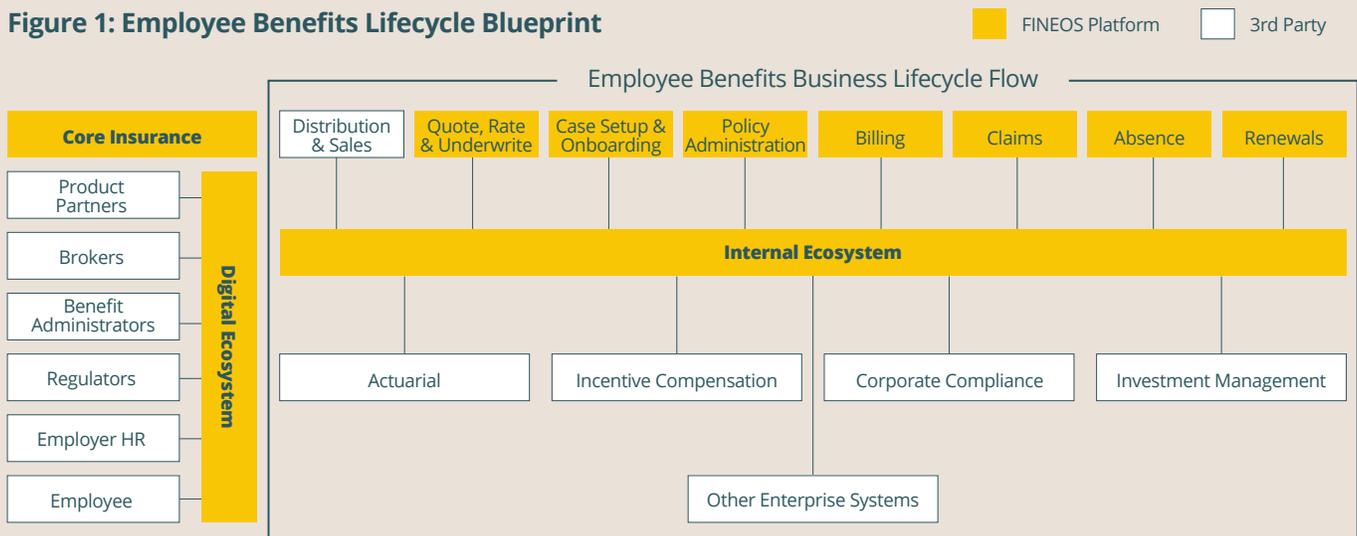
Technologists and business leaders agree that their core systems need to become more modern, more digital, and more open to insurance ecosystem partners: the question is how.

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In a perfect SaaS world, insurers wouldn't care about an application's underlying architecture and infrastructure. But the truth is that insurers don't live in a perfect world and SaaS for the insurance space is still evolving. The complex nature of employee benefits means that insurers must engage with a large and expanding partner ecosystem, which includes employers, brokers, benefit admins, and product partners. Each of these partners is necessary to fill gaps that the insurer doesn't directly offer themselves (Employee Benefits Lifecycle Blueprint, see Figure 1).

To layer on more complexity, most insurers also have existing application architecture that needs to either integrate with the platform or must cede its functionality to the platform's over time. Achieving streamlined integration becomes complicated if a system is homegrown (see monolithic) or a patchwork of piecemeal systems (see best-of-breed). Therefore, it is essential that insurers embrace an open architecture system with strong process management and access controls for connection to third-party applications in the cloud and/or on-premise.

Figure 1: Employee Benefits Lifecycle Blueprint

Legend: FINEOS Platform | 3rd Party

Employee Benefits Business Lifecycle Flow

Core Insurance
- Product Partners
- Brokers
- Benefit Administrators
- Regulators
- Employer HR
- Employee

Digital Ecosystem

Distribution & Sales | Quote, Rate & Underwrite | Case Setup & Onboarding | Policy Administration | Billing | Claims | Absence | Renewals

Internal Ecosystem

Actuarial | Incentive Compensation | Corporate Compliance | Investment Management

Other Enterprise Systems

Architecture Matters in a SaaS World (continued)

At FINEOS, we believe our purpose-built platform architecture meets this need most effectively.

The employee benefits business lifecycle is made up of defined steps, some supported within the core insurance platform, some within the insurer's other enterprise applications like general ledger, and some within external partner systems like benefit admin, enrollment, and product partners. These defined steps can lead to thinking that a distributed system architecture with best-of-breed applications controlled by an enterprise service bus heavily leveraging APIs and microservices is required.

Admittedly, this can work, but it's not optimal. In the face of current requirements around real-time digital service, scalability, business resiliency, security and privacy standards, a purpose-built SaaS platform meets these standards.

A purpose-built platform takes the best of the monolithic and best-of-breed architectures and satisfies the criteria of the new digital, partner ecosystem-friendly core system to meet the needs of a highly-regulated employee benefits market. To do that, we need to look at the pros and cons of the core systems and architectures from the past.

The Original Monolithic Systems

Historically, the monolithic core system held advantages for the insurance industry. Built for large-scale processing on high-performance hardware (mainframes), the systems provided security, scalability, and reliability … for a period of time. Homegrown bespoke systems tended to be "spot on" for the insurer building them – at least initially – and the vendors building monoliths tended to have a clear picture of the insurance lifecycle and necessary core capabilities. In either case, since they were built by insurance people for insurance people, they contained a considerable amount of out-of-the-box insurance functionality.
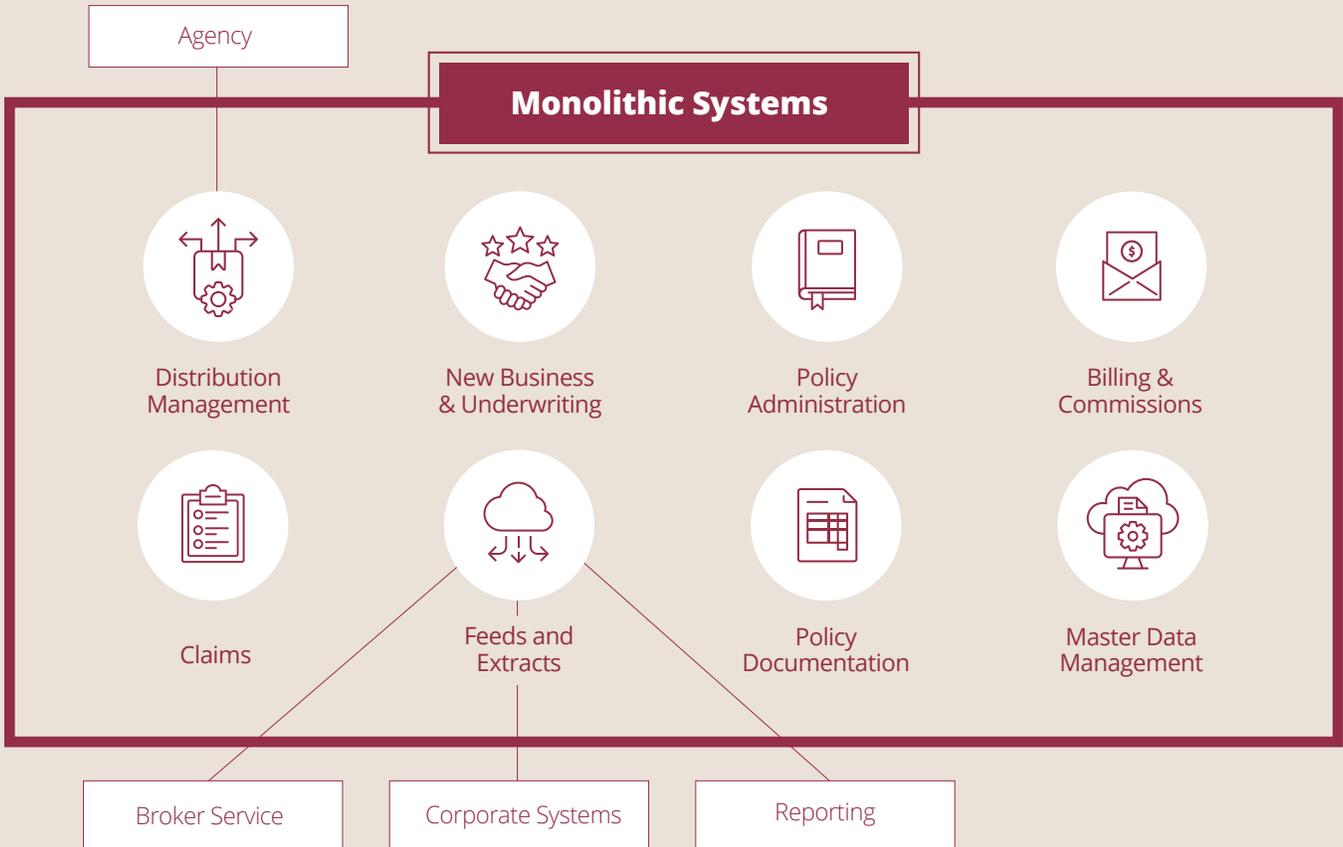
X *Lack of flexibility*   X *Closed architecture*   X *Difficult to upgrade*

The downside proved costly: lack of flexibility, long implementation times, cost, primitive user interfaces, and closed architecture that made direct connection to partners and customer difficult. And the cost to the insurer began to grow incrementally with insurers needing to field large IT departments with dedicated software developers even when working with vendor systems, which were often difficult to upgrade. Insurers suffered too much from lock-in syndrome, where none of the internal components were easily replaced if the business or technology landscape changed. At the same time, wholesale replacement was increasingly difficult, expensive, and carried heavy risk. This resulted in a growing mashup of add-ons from third parties wrapped in customization. And it became increasingly difficult for insurers to keep up with emerging competitors.

Figure 2: Monolithic Systems – Purpose-built for their time but not the future

Monolithic Systems — Pros and Cons

⊕ Built on scalable, secure platforms	⊖ Expensive, closed platforms
⊕ Closely coupled processes	⊖ Difficult and expensive to upgrade
⊕ Common data model	⊖ No support for digital service initiatives
⊕ Built by insurance people	⊖ Dated user experience
	⊖ Risk of technology obsolesces
	⊖ Lack of support for real-time business processes

Best-of-Breed to Microservices

Best-of-breed architecture emerged as the answer to the restrictions of the monolithic core system framework. Vendors appeared within the insurance space or from adjacent industries with modular solutions focused on elements of the insurance lifecycle like billing, incentive compensation, and claims management. These systems were generally designed to be part of a larger application framework with interfaces and feeds, enabling insurers to mix and match systems to some extent.

✕ Data management issues	✕ Coordination among components	✕ Friction across processes

Insurance technologists like this approach as it provides technical flexibility and the opportunity to upgrade their infrastructure. Business at the functional departmental level likes it, as they can get point solutions, such as billing, with extended general features from experts in that functional area. Unfortunately, though, these point solutions require significant insurance SME support and direction to work properly.

At the enterprise level, however, the network of best-of-breed solutions has resulted in insurers facing complex master data management issues, creating customer information hubs and installing enterprise service bus software to support distributed application architecture. The coordination cost and time required to orchestrate the distributed architecture remains quite high.
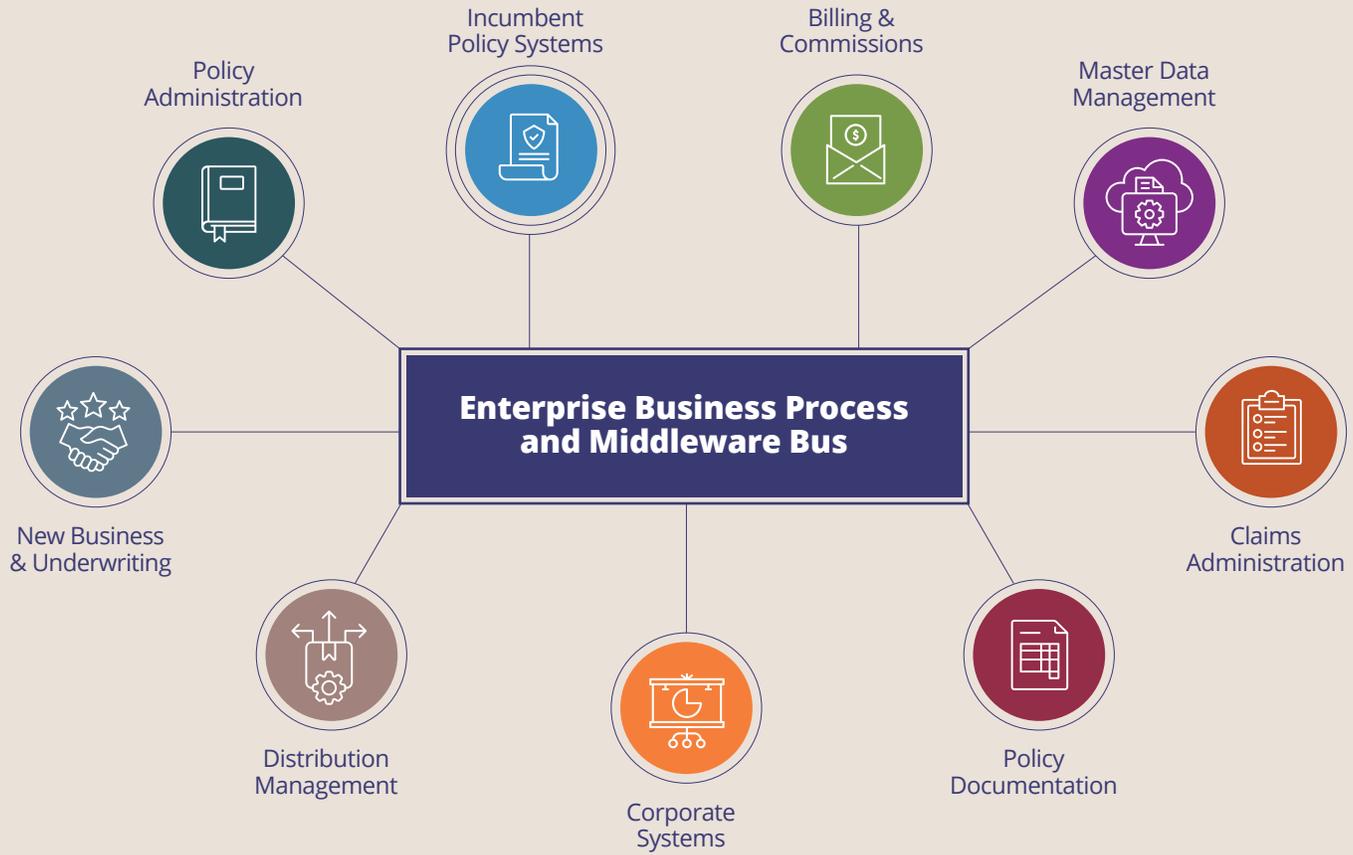
A further problem with best-of-breed architectures is that functionality disappears in the gaps between components. Vendors define their component functional boundaries without reference to each other's functional roadmap and data definitions. The selection of components becomes insurer-specific and unique. This leaves the insurer to fill the gaps between components with customization, often on an ad hoc basis since the gaps are not visible up front. This ad hoc gap-filling process is often not recognized initially as a requirement, resulting in a critical "integration" layer of growing business complexity, unique to and owned by the carrier. Over time, this layer creates friction in maintenance, additional complexity, and reduced agility. Insurance platforms must solve for business processes that span components, not just those that affect single components, productizing this functionality and reducing insurer cost of ownership. Best-of-breed architectures routinely fail this test.

One reason insurance companies are moving away from last gen, pure best-of-breed systems is the complexity and fragility of distributed architecture. Robust distributed application architectures exist, but they are often difficult to maintain at scale due to connectivity and data transformation issues, complex coordinated cross-system process monitoring and resiliency, and the need to manage diverse product roadmaps and upgrade paths. They also lead to insurers focusing on optimizing their components, which tends to make the end-to-end process disjointed.

> *Insurance platforms must solve for business processes that span components, not just those that affect single components, productizing this functionality and reducing insurer cost of ownership.*

Figure 3: Best of Breed – Flexible but require a lot of upfront assembly work, vendor coordination and ongoing maintenance

Best-of-Breed Systems

Policy Administration

Incumbent Policy Systems

Billing & Commissions

Master Data Management

Enterprise Business Process and Middleware Bus

New Business & Underwriting

Claims Administration

Distribution Management

Corporate Systems

Policy Documentation

Best-of-Breed Systems Pros and Cons

Pros	Cons
Modern technology platform	Requires complex technical infrastructure insurer must manage or outsource
Access to leading stand-alone components	Components must be integrated by insurer or third party including functional gaps
Compatible with API/micro services architecture	Disparate data models must be reconciled
Integrates with modern customer engagement systems	Scalability, security and redundancy must be managed for each module
	Product roadmaps and upgrades need to be managed by insurer or third party

APIs That Matter with a Purpose-Built Platform

APIs are important to a purpose-built platform, but they are implemented differently than the toolbox approach taken by many vendors. The toolbox approach assumes that all APIs and microservices can be used standalone, available to any other application across the network.

This usually requires re-entrant, stateless functions that receive exactly the right parameters to provide appropriate context. This makes sense when a single developer is building components and capabilities within a single platform, but it is extremely difficult as a multivendor integration strategy.

The purpose-built FINEOS Platform utilizes APIs That Matter, which focus on the critical connection points between modules, expected partner systems, and to fuel digital transformation using industry standards, such as LIMRA LDEx.

The Purpose-Built Platform Streamlines Incremental Transformation
Incremental transformation recognizes that large-scale projects involve critical business systems and require a clear vision of the desired end state, careful long-term planning, aggressive change management and a staged approach over time.

The purpose-built FINEOS Platform supports an incremental transformation approach by providing an end-to-end target solution with modules that support incremental milestones. The platform works with existing modules and applications as needed. With insurance DNA baked into its business processes, the purpose-built platform becomes the end-to-end process manager using APIs to enable managed, frictionless service for customers and partners. Thus, the FINEOS Platform replaces generic process orchestration tools that require large amounts of configuration and customization to deal with insurance-specific processes.

Change management presents a big challenge for insurers especially when process, regulatory compliance, and product lineup modifications need to be addressed across departmental functions. A purpose-built platform is best positioned to provide a holistic macro framework for end-to-end implementation of new regulations and new products. This ability to be incremental and holistic at the same time is much more difficult in a best-of-breed architecture and falls on the insurer's shoulders to create, maintain and certify.
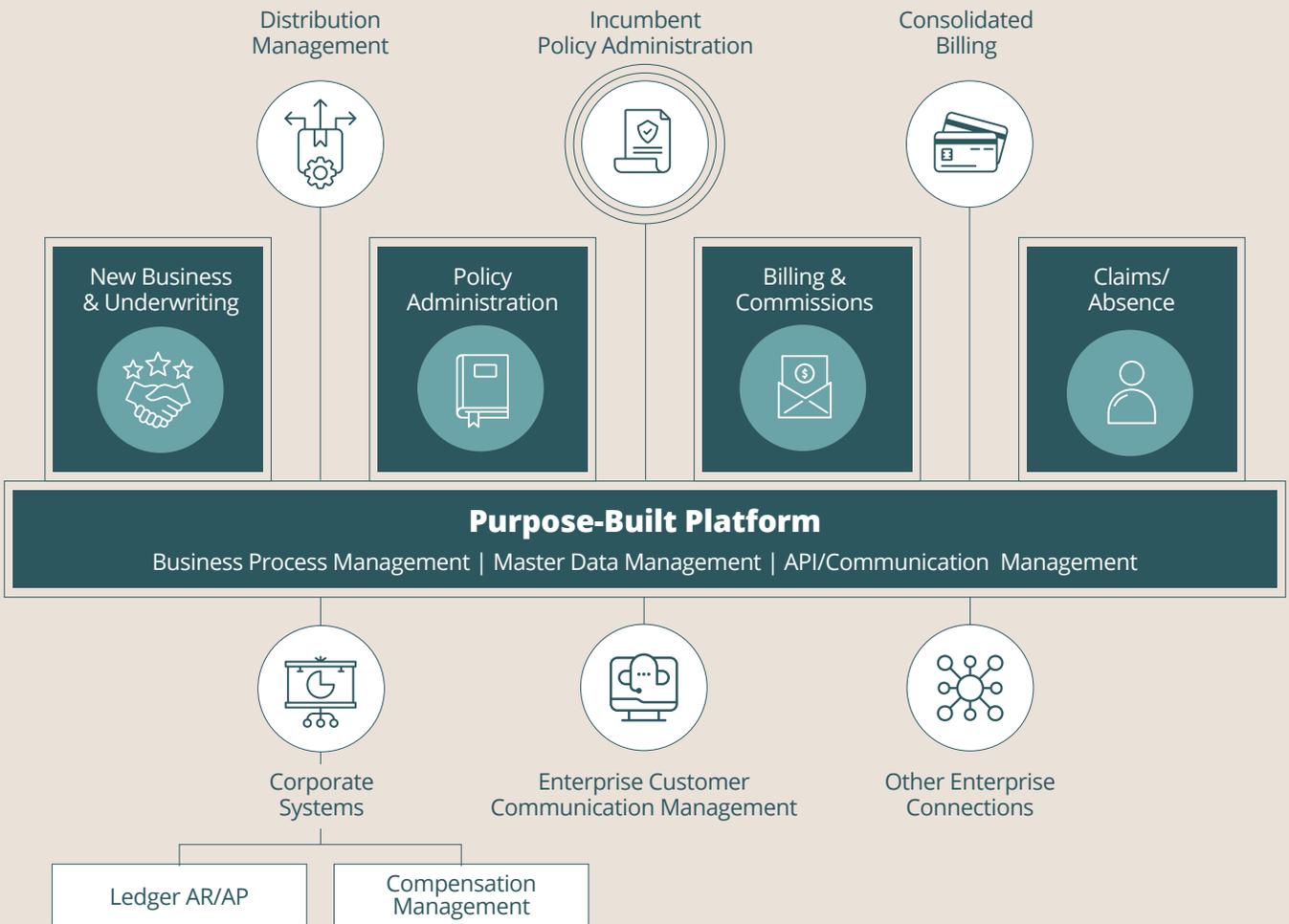
3 main types of APIs That Matter:

1. **Component connections** to enable connectivity for shared corporate functions such as incentive compensation, CRM or financials.
2. **Existing core systems** that must continue to function for business reasons until the system can be replaced or at such time that a book of business runs off. This is a very common scenario in long-term incremental transformation initiatives.
3. **Customer and partner connections** using APIs directly between parties' systems or building client- and partner-specific UX based on those APIs. Since the function of these APIs is different from those connecting components, so are the APIs. Insurers can build custom-engagement APIs on top of role-agnostic component APIs or use a platform which includes them.

Figure 4: Purpose-Built – The next generation of core system architectural models with the best of both worlds

Purpose-Built Platform

Distribution Management

Incumbent Policy Administration

Consolidated Billing

New Business & Underwriting

Policy Administration

Billing & Commissions

Claims/ Absence

Purpose-Built Platform

Business Process Management | Master Data Management | API/Communication Management

Corporate Systems

Enterprise Customer Communication Management

Other Enterprise Connections

Ledger AR/AP

Compensation Management

Purpose-Built Systems — Pros and Cons

⊕ Built on scalable, secure platforms

⊕ Modern technology platform

⊖ Works best when fully adopted

⊕ Closely coupled processes

⊕ Access to leading stand-alone components

⊖ Designed for a specific subject matter area and not easily ported to other SMAs

⊕ Common data model

⊕ Compatible with API/micro-services architecture

⊖ Not useful as a micro service toolbox

⊕ Built by insurance people

⊕ Integrates with modern customer engagement systems

The Purpose-Built Advantage

In a time of continuing technological advances, it's easy to believe technology will solve all of our problems. Unfortunately, this mindset leads to a focus on finding the perfect toolset and then conscripting a few insurance SMEs to add the "insurance IP" to the latest generic technical workflow/AI/predictive/API-enabled platform. Some software vendors and new-age insurers actually conflate a lack of business understanding as a necessary part of disruption.

✓ *End-to-end business process*   ✓ *Critical industry IP*   ✓ *Industrial platform*

The purpose-built mindset says, "Let's start with understanding the context and flow of our business including the regulatory guardrails, and add technology to make products more flexible, interactions quicker and smoother, and use AI-enabled processes to make frictionless services better, faster and more resilient." The focus is on the end-to-end business and overall service to the customers, controlled by a platform that has insurance in its DNA. Building on that basis of strong industry intellectual property and understanding the regulatory guardrails, innovation and even disruption can occur.

Moving to a Purpose-Built Platform

When insurers decide to move to a purpose-built platform, the good news is there are several deployment options to meet immediate business and technology needs as well as long-term direction. The four broad scenarios are:

1) Component Replacement
Even if an insurer has no pressing business or digital transformation agenda, components in any system need replacement over time. Sometimes applications are sunsetted by the vendor, underlying technology fees like databases become too expensive, or the component

can't meet required security or privacy standards. There is a need to close the gap with little business disruption and minimal change management effort.

A purpose-built platform approach to component replacement starts with replacing the component with a platform module, such as the FINEOS Claims module, which is used by over 60 insurers today and can be integrated with existing systems to provide a smooth transition. The advantage to using a component from a purpose-built platform vs. a best-of-breed component is the opportunity to add additional components over time that are guaranteed to be compatible with the claims system and gain the advantages of the end-to-end, purpose-built platform at the insurer's pace. (Note: In the example, FINEOS Claims is the leading best-of-breed component as well as a FINEOS Platform component.)

2) Functional Upgrade
Often, insurers need additional functional capability to support a new line of business, product type, or channel partners. Like the component replacement, the functional upgrade does not bring systemic change to the business process, but there will be adjustments and enhancements to use the new capabilities that require a moderate amount of change management.

The Purpose-Built Advantage (continued)

A purpose-built platform approach to a functional upgrade is a better approach than extending the component replacement model. Applying multiple separate component replacement initiatives has many of the negatives consequences of the best of breed model.

For example, a new product might require policy and billing replacement modules and new configuration for existing new business and claims modules if they can support the expansion. Once the scope of change and replacement modules are identified, the insurer can install the new modules from the purpose-built platform and integrate existing modules using the platform end-to-end process capabilities to manage the flow, thus beginning the transition to a platform-centric model.

3) Digital Transformation

An insurer's digital transformation initiative almost always requires an upgrade or replacement of core systems to enable frictionless digital service. Most incumbent core systems can't meet this bar.

A purpose-built platform like the FINEOS Platform is designed to not only meet the high bar for core system performance and required reliability but also provide the connectivity and security to safely support a digital ecosystem. A single workflow process and common data model makes it easier to map to external systems of engagement once. The platform can then manage any processes initiated within the platform end to end and through standard APIs/services. This greatly reduces the risk of stalled or "lost" requests and data. This approach enables insurers to use existing enterprise customer engagement systems, new digital engagement tools, and the purpose-built platform's functional portals.

> *A purpose-built platform approach to a functional upgrade is a better approach than extending the component replacement model.*

4) Greenfield Business

When an insurer launches a greenfield business initiative, they need to either TPA or build their technology platform and processes from the ground up. The good news is that while it is usually time and cost intensive, installing a purpose-built platform that includes insurance content and processes to be configured for particular products and distribution is much less expensive and time-consuming. For a greenfield, the unique value of a purpose-built platform over an existing monolith is the ability to configure the system to handle non-traditional products common to greenfield initiatives like absence management, supporting services for insured conditions (i.e., post life claims, critical illness care support), and lifestyle benefits.

Figure 5: The Purpose-Built FINEOS Platform

The FINEOS Platform is the ONLY modern core insurance platform for employee benefits.
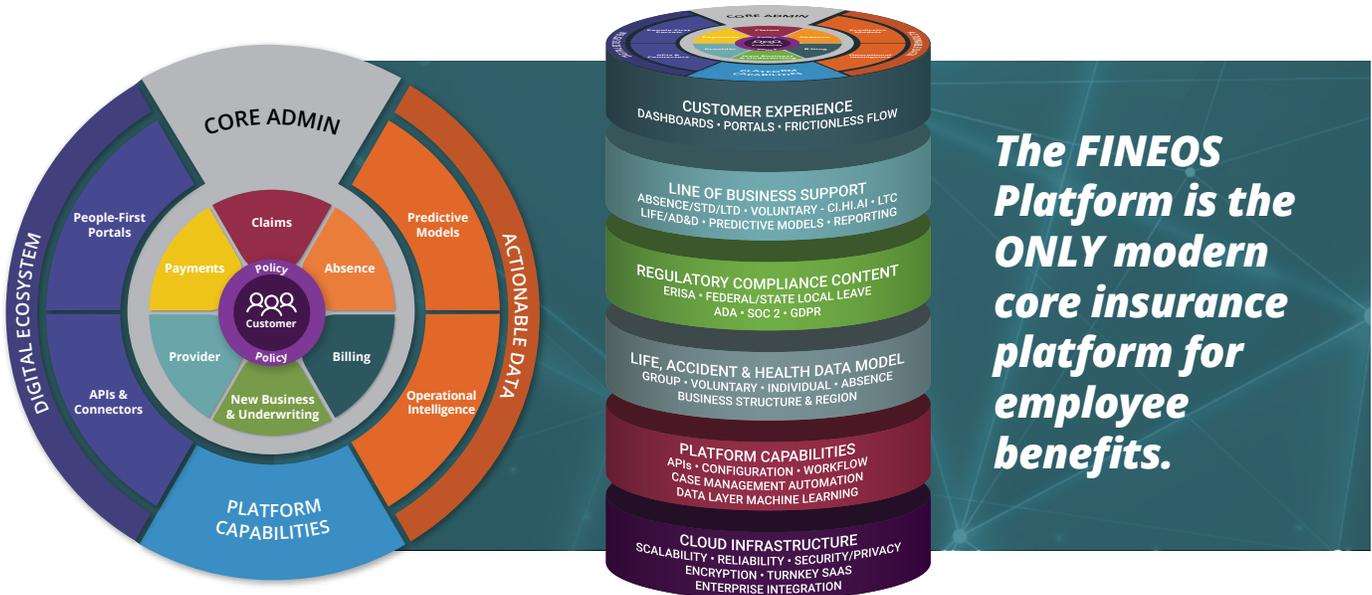
The FINEOS Platform Differentiators

- Easier training and fewer errors due to a consistent user interface across the suite.
- Accelerate managed digital transformation through incremental transformation support.
- Frictionless service with platform-driven straight-through processing.

- Easier ecosystem connectivity through APIs that matter based on LDEx standards
- Reduce operational costs, leakage and service issues using the same workflow processor across the employee benefits lifecycle.
- Real-time digital service, scalability, business resiliency, security and privacy standards.

Conclusion

The purpose-built FINEOS Platform has the most to offer to both new insurance startups looking to quickly deploy and enter the market, and incumbent insurers that need to transform to meet new market requirements.

Our purpose-built platform is more than technology. It is a business process framework with critical intellectual property baked in, residing on an industrial platform. This combination provides carriers with broad options while reducing deployment costs and maintaining industrial strength, scalability, and privacy. FINEOS is committed to this model, and we invite you to reach out for a deeper discussion of how we can help you leverage this approach to meet your unique business needs.

The FINEOS Platform is a purpose-built insurance core system platform that can be deployed as an end-to-end solution (FINEOS AdminSuite), as a smaller, complete Market Solution (i.e., IDAM, Claims, PAS, NB&U) or as modules supporting a best-of-breed application architecture (i.e., Billing, Rating) if needed. Installing the FINEOS Platform end-to-end is the best option for high performance, frictionless service and to support digital transformation across the employee benefits lifecycle, but our purpose-built platform is also designed to work with other applications as insurers work through long-term transformation initiatives.