WHITE PAPER

# RE-IMAGINING CARE-AS-A-SERVICE

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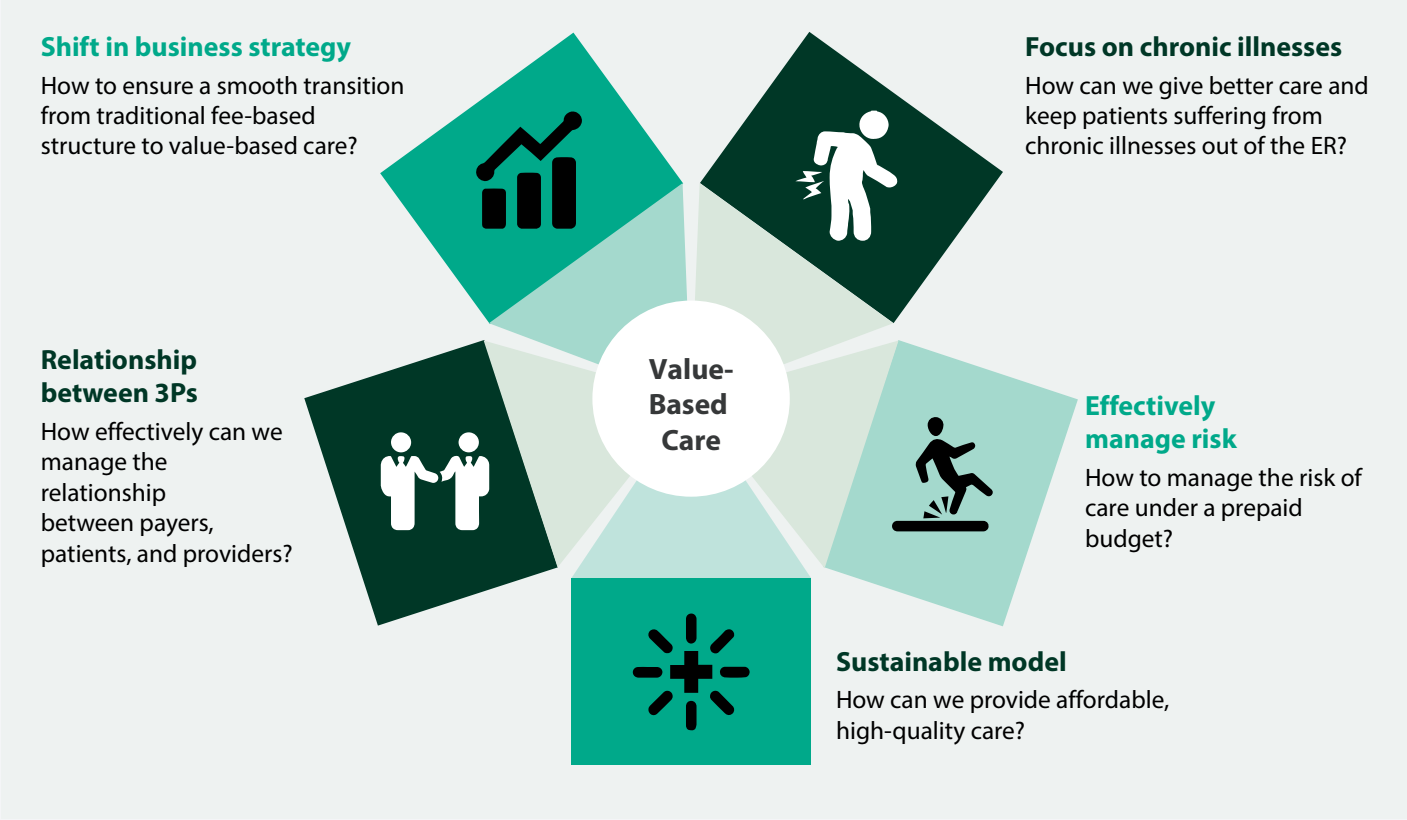
## Keeping up with shifting trends in healthcare

The healthcare sector has been in existence for many decades. This sector has been fragmented and slow to adapt to the new technology trends. But today, there are forces acting on it, such as the increasing proportion of the population moving to pensionable age, evolution of the healthcare consumer, and explosion of wearables / personal health tracking apps. These forces have caused many of the healthcare organizations to transform and track the value of the care provided to patients.

This change is not easy – shifting to a value-based healthcare system from the traditional fee-based structure has been slow and overwhelming. It is clear for large healthcare ecosystems to connect the payers, providers, and patients in the same direction of innovation and progress. This requires complete redesign of the health care platform, enhanced co-ordination among multiple user groups, and investment in new resources and skill sets.

This white paper illustrates how preventive care can be provided as a service on a cloud-based platform. It also embraces key innovations in the healthcare world and leverages a simple design philosophy of intent-driven design to solve the key problems faced by the payer while providing preventive care for patients. The end goal is to help the payer achieve long-range customer experience and success.

## Key drivers for value-based care



- **Shift in business strategy** – Payers have always been competing with each other to attract more patients with lower prices and better quality care. This shift to value-based payments from the traditional fee-for-service model has become inevitable. The payers who are not able to innovate and continue in an outdated model would suffer higher operating costs, as business has shifted to higher value activities.
- **Focus on chronic illnesses** – Chronic illnesses are on the rise and are responsible for 7 out of 10 deaths in the US and the treatment of these chronic illnesses accounts for 86% of US healthcare costs according to the US Center for Disease Control. There is a need to care for patients suffering from chronic illnesses and help them stay out of the ER.
- **Relationship between the 3Ps** – Payers (health insurance providers), providers (healthcare providers – hospitals), and patients, are seeking a closer relationship. There is a need for a better model to maintain these relationships as more and more patients look forward to higher value from their payers in consuming the services from their physicians.
- **Effectively manage risk** – Providers who pursue value-based care as a strategy gain expertise in managing the risk of caring for a population under a prepaid budget.
- **Sustainable model** – Providing relatively affordable, high-quality care is much less likely to fail as a strategy, not just with respect to the bottom line but also in terms of how an organization fulfills its mission.

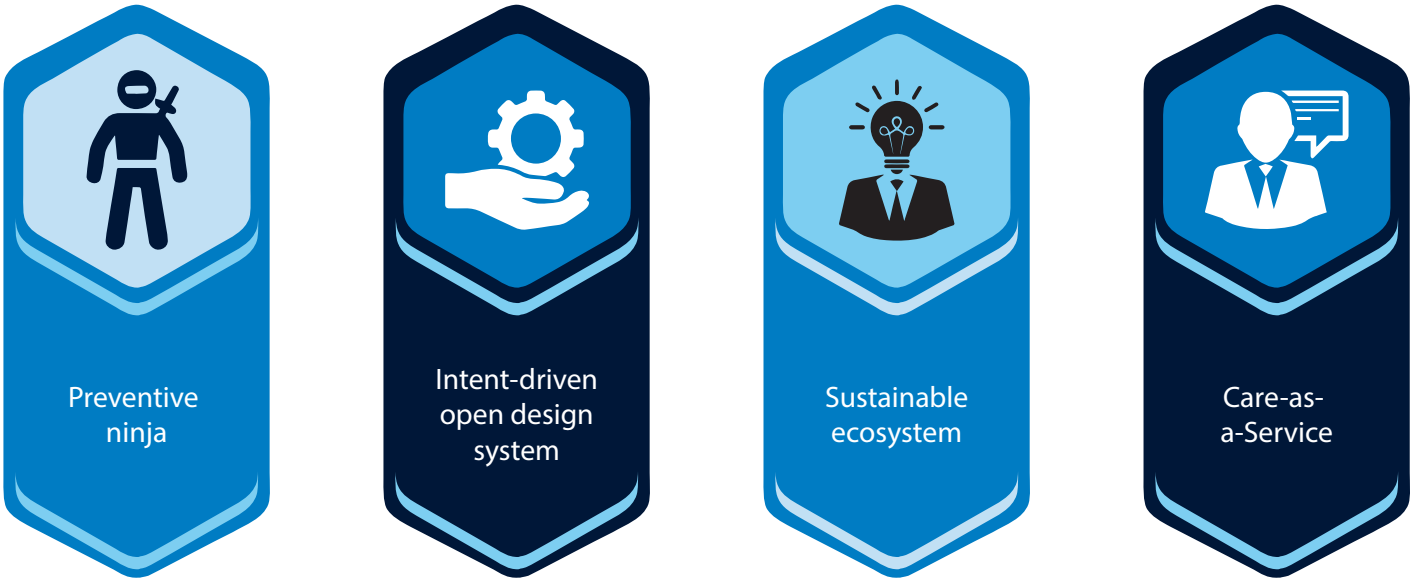
## Why Care-as-a-Service?

In this new era, the healthcare models have moved from fee-for-service to a value- or outcome-based model. This shift in the healthcare model has imposed multiple challenges on these traditional IT stacks where the prime design philosophy is to cater to a 1–1 relationship between the patient and the doctor.

This value-added healthcare model would need healthcare platforms to provide the following:

- Process improvements and optimization of payer administration
- More predictable outcomes and lesser risk
- An enhanced care experience for the co-ordination teams (payer), patient, and provider
- Unified data including a 360 degree of the patient
- Less wasted time
- Connected patients for a better health consumer engagement

## How can we provide Care-as-a-Service?




### Pivotal preventive care

The payer's space operates on an 80-20 rule, where 20% of the patients account for 80% of the healthcare costs. Hence, it is imperative to keep this 20% of the patients out of the ER. These patients could be suffering from chronic illnesses such as cancer, diabetes, or heart problems. The key design philosophy is to build a platform which will help us detect and prevent these chronic illnesses and keep the patients healthy.

In defining the payer's relationship with the patient, there is always an IT-based approach taken by many of the prevailing solutions in the market. Why isn't there focus on the diseases causing these chronic illnesses? What if we design and build a care platform which will focus on specific disease conditions of the patient – cancer, diabetes, and heart-related ailments, to start off with and then expand the functionality on more specific disease conditions?

### Open design system

Focus should be to provide a simple intent-driven design principle. We have embarked on a journey of having an open design system to build simple components which can be taken to the AppExchange (Salesforce Marketplace). The focus would be to build a self-helping community on AppExchange and have more people help us out with design ideas.

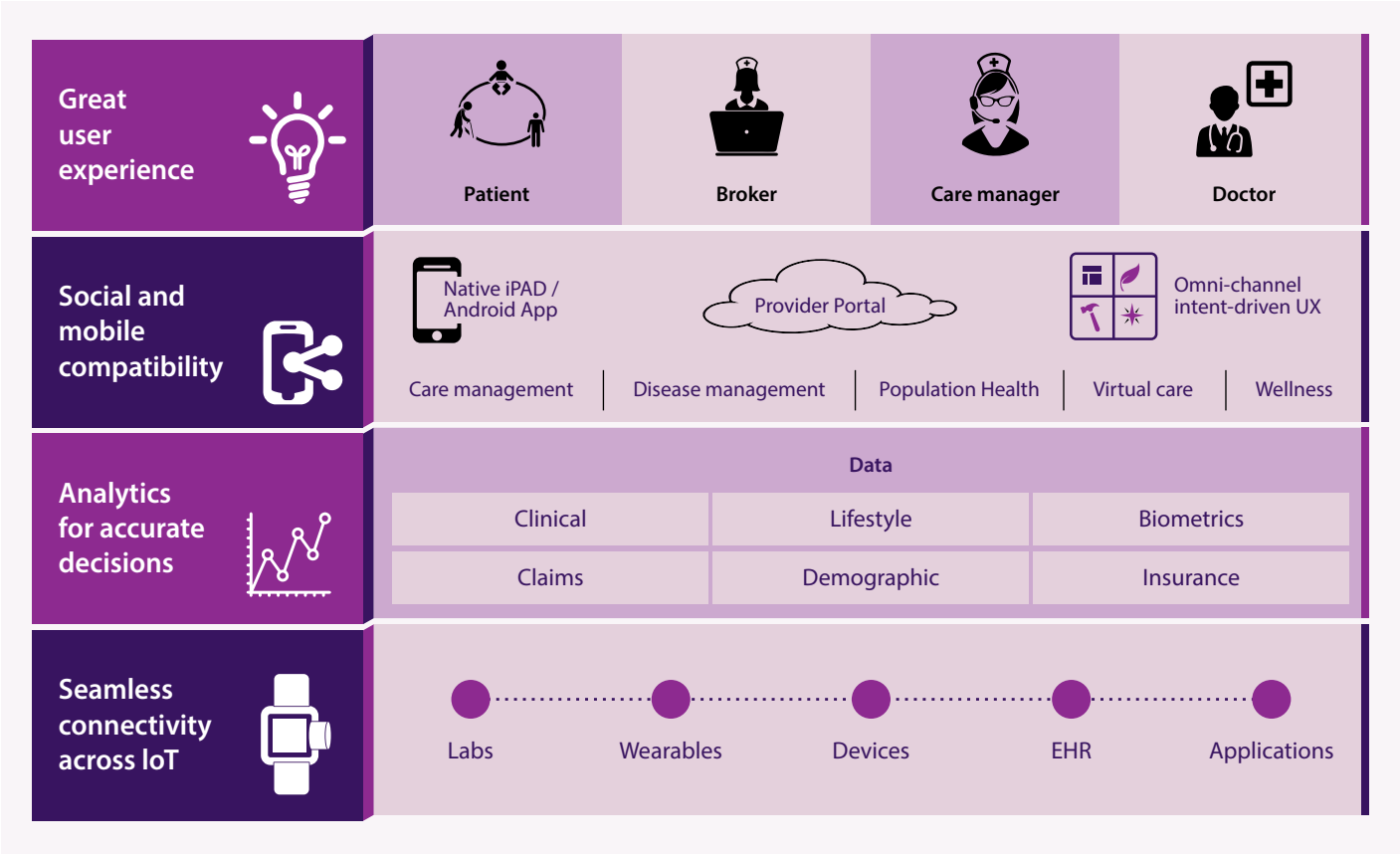
### Sustainable ecosystem

Healthcare is still a highly fragmented industry. More than half of US physicians work in practices of three or fewer doctors; a quarter of the nation's 5,000 community hospitals and nearly half of its 17,000 nursing homes are independent; the medical device and biotechnology sectors

are made up of thousands of small firms.

Further, there is an abundance of monitoring devices and health trackers to motivate a patient to exercise, eat well, take their medications, and live more engaged lives. But to make a difference, these products must be integrated into the daily lives of a patient and connected to the care providers and payer.

The solution platform should be complemented with a simple ecosystem which can support vertical integration (focus on care for multiple disease conditions under the same roof) and horizontal integration (roll out for connecting multiple stakeholders across the payer, patients, and providers).




This will help the patients get a single-roof for their care and are freed from the burden of coordinating their care with myriad providers (for instance, Care Manager would have to co-ordinate with the primary physician, lab technicians, pharmacist, and the other specialists – ophthalmologists, podiatrists, cardiologists, neurologists, and nephrologists, who care for diabetics). `Focused factories,' to adopt C. Wickham Skinner's term, cut costs by improving patients' health. Furthermore, they reduce the likelihood that an individual's care will fall between the cracks of different medical disciplines.

### Care-as-a-Service

Cloud adoption has fuelled the need for stronger relationships between the patient, provider, and payer. It is imperative we build a cloud-based platform and provide it as a service to our customers. This will give flexibility for the healthcare provider to maintain the right balance of complexity across the IT stack.

## CarePlus solution platform

The proposed solution platform on cloud can be illustrated through the MVC+SI framework.

| Framework | | Detailed description |
|---|---|---|
| M | Model | The data model is member-based in which the associated data would be modeled around the member entity. The force.com data model would be extended through custom objects to house care plan, medical, lab, and other member-related data. |
| V | View | Lightning Design System would be leveraged to build this omnichannel UX. The Intent-driven UI would be provided as a set of components, based on the need of the payer; these LDS components would be leveraged.<br>Also, there would be native iOS and Andriod Apps built using Intent Driven Design for the respective devices. |
| C | Controller | Force.com workflow processes would be leveraged to build optimized payer administrative processes. |
| S | Security | • Security matrix has been designed over the existing force.com security model.<br>• Data would be secured through encryption and tokenization based on the need. |
| I | Integration | There would be a simple and scalable integration framework which can be leveraged to extend the platform as a layer of interaction across an application and data sources of the payer. |

## Road to a new beginning…

The key success factors for this `preventive care' platform would be:

- Localization – Healthcare industry is characterized by a high degree of government regulations and also the processes differ significantly from one country to another (or one state to another in the US). There is a need to segregate localized information on the providers and keep this connected to the patient's data and localize the payer administrative process for each state / country
- Integration framework - Need for the right tools to connect the key players across the provider, patient, and the payer and foster collaborations across the key stakeholders. The platform should provide a scalable and extendable integration framework to extend the platform as a `layer of engagement' over the existing IT ecosystem
- Intent-driven UX – There is a need to support omnichannel UI across multiple devices through a UX designed for care managers and case managers to help them quickly access the needed data on the patient or provider
- Patient connect – There is a need to provide personalized care management for the patients and help them effectively avail the healthcare services and consolidate the scattered patient data
- Specialized care – The focus would be for vertical integration where the platform would be extended for specialized care such as geriatric and prenatal care. The platform would also support virtual care capabilities such as location-tracking and telemedicine

The end state of the platform is to provide preventive care as a service for the payer organization where patients, health care professionals and payer teams can collaborate through a single view of the patient and maximize value.

## About the author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Karthik has 11+ years of experience working on Enterprise CRM platforms such as Salesforce.com, Amdocs CRM, and Chordiant. He has been a solution architect in multiple CRM engagements across domains such as telecom, banking, and healthcare insurance. His focus areas include Salesforce.com, wearables, and analytics for preventive care.


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