PHILIPS

HealthSuite

digital platform

Philips HealthSuite digital platform

Powering the next generation of connected health solutions
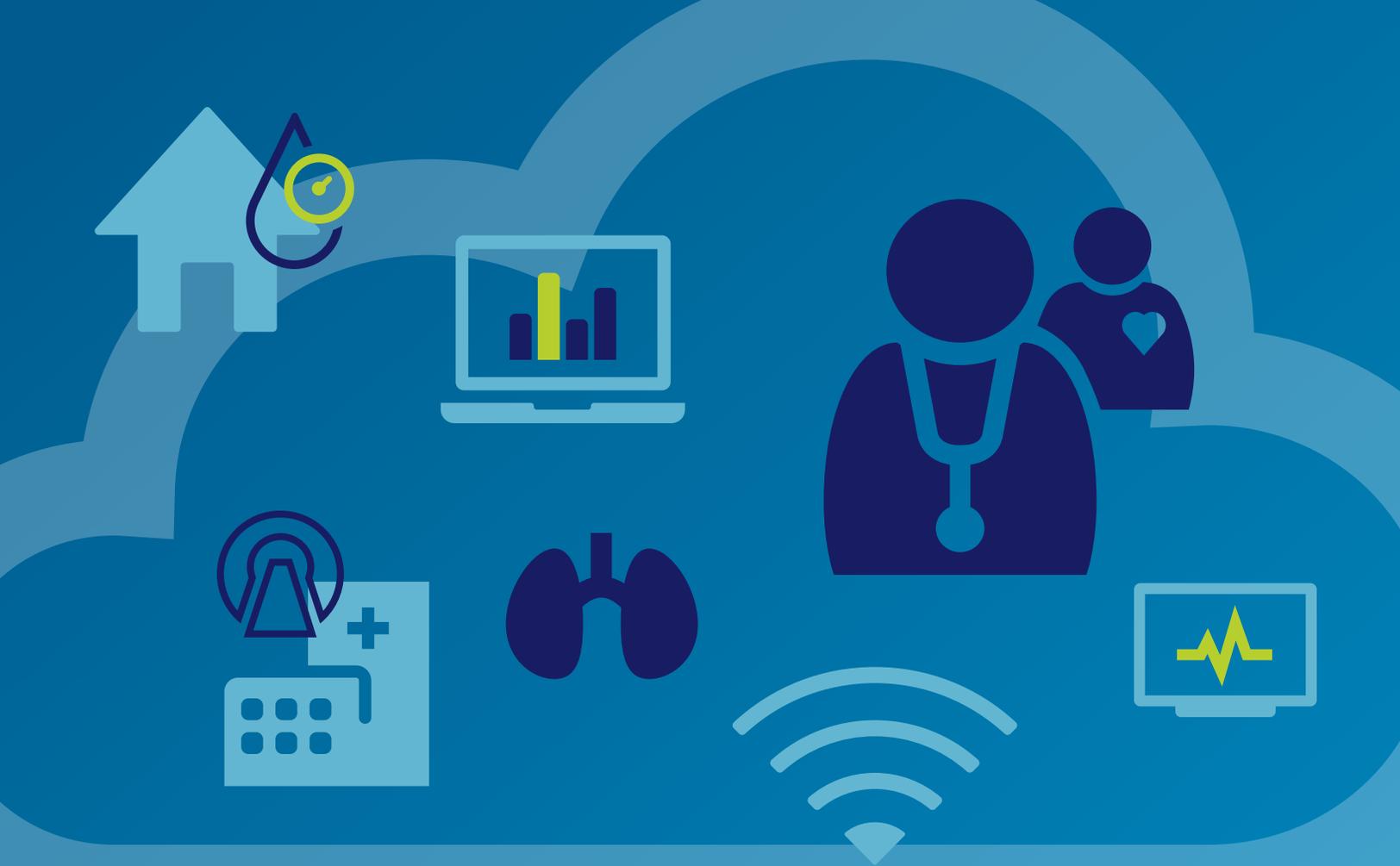
Developing healthcare regulated solutions in the cloud presents many challenges driven by the necessary security, privacy and regulatory controls. This involves a significant investment in resources, time and expertise that many organizations cannot afford.

Philips HealthSuite digital platform is focused on providing a simple, fast and cost-effective cloud platform designed to support innovation in a healthcare regulated environment.

Accelerating the pace of innovation for healthcare and life science organizations

At Philips we strive to help make the world healthier and more sustainable through innovation. Our HealthSuite digital platform fosters open and collaborative innovation focused on developing breakthrough health, wellness and life science solutions that will transform the way care is delivered. By connecting devices, unlocking data and fostering collaboration we will help to encourage new forms of engagement, actionable insights and better health outcomes.

HealthSuite Key Components

Privacy, security and regulatory compliance to ensure that the cloud infrastructure and platform as a service offering are compliant with appropriate healthcare and regional requirements.
- Privacy, security and regulatory controls
- Operational security
- Penetration, privacy, and security testing and reviews
- Security and privacy incident management and specialized security services, including Enforced Security Logging and containerization
- An extensive set of external compliance certifications and attestations to provide objective evidence of compliance to security and privacy regulations
- An Information Security Management system designed to help ensure that services provided by HSDP are compliant with current certification levels
- Platform services with APIs to address the needs of healthcare and consumer solution development
- Orchestration capabilities designed to integrate dependent services with HSDP identity and access management
- Containerization of applications
- HSDP's Cloud Foundry application hosting/ build environment: A commercial Cloud Foundry environment for cloud-native development that meets regulatory requirements to support you in rapidly developing and testing applications
- Self-service model e.g. through developer web portals and extensive online documentation

API's that provide developers with the ability to consume underlying orchestrated services.
- Abstraction layer on the cloud infrastructure and foundation cloud services that allows developers to consume the underlying services
- HSDP uses APIs, industry standards, such as OAuth2, and healthcare standards, such as HL7 and FHIR, to reduce your development effort.

Full Operations support from HSDP: 24/7, 365 days a year support to configure, maintain, monitor and provide operational availability of HSDP and the solution you are hosting on HSDP.
- Vendor management
- Configuration and maintenance of orchestrated, containerized, healthcare-compliant infrastructure
- 24/7 support to provide operational availability of orchestrated, containerized, healthcare compliant infrastructure
- Incident Management that complies with ITIL standards
- Continuous monitoring of the performance and availability of the platform, including cloud infrastructure, custom services, and applications
- Maintenance of HSDP infrastructure and software within expected service level commitments

HSDP cloud expertise to support your cloud development.
- Technical and business documentation and code samples on the Client Experience Portal
- Cloud development expertise to support developers in designing interoperable, secure, cloud-based microservice architectures
- Curated and moderated Slack channels for topical questions and knowledge sharing by the HSDP ecosystem community

Solutions developed on Philips HSDP can help you to achieve your key objectives including better health outcomes, cost reduction, gains in efficiency, patient centricity, enhanced security & compliance and better decision making.

Predictable costs and savings
HSDP improves your total cost of ownership by providing a shared multi-tenant, cloud platform that saves you the cost of purchasing, managing, configuring, updating and maintaining hardware and software, compliance and staff. Our self-service, on demand approach allows developers to either use our portal for configuration or directly interact with the APIs. HSDP provides flexibility to pay for only the services you use. Scale up or scale down based on your needs.

Keep pace with industry trends while meeting short term financial and technology goals. Since costs are operational vs capital your organization can ease into the solution and scale and grow at your own pace.

Security and compliance
HSDP safeguards health and other sensitive data in the cloud through a certified Information Security Management System; specific security services within HSDP; external audits and penetration testing; privacy, security and regulatory controls; and operational security. HSDP also maintains an extensive set of external compliance certifications and attestations to provide objective evidence of compliance to security and privacy regulations such as ISO 27001/18, HIPAA, GDPR and HITRUST.

Better decision making through robust data
The ability to collect and analyze data is key to providing improved patient care. HSDP provides easy access to both clinical (EMR) and consumer data while allowing developers the ability to create a unified view without having to go app to app. This makes it possible to create a holistic view of the patient to help improve decisions related to ongoing care at the individual patient level. Applications created on HSDP have the potential to share and capture data with greater frequency and intelligence which can allow earlier interventions and strengthens the ability of providers to interact with patients in settings outside of the hospital.

Applications built on HSDP can support a variety of patient engagement solutions that help to make it easier for patients to stay engaged throughout the healthcare continuum. Examples of solutions that can be developed on HSDP include enterprise telehealth solutions, connected sleep monitoring, predictive analytics, medication adherence and clinical informatics capabilities to name a few.

Simplicity, scalability and speed to market
HSDP removes the complexity of building and managing your own healthcare security and privacy compliant cloud infrastructure and platform. We created HSDP to provide a shared expertise and fully managed cloud-based infrastructure and platform-as-a-service to eliminate the burden of having to develop and maintain it yourself.

HSDP provides the tools to help speed your development time and your transition to the cloud, whether you have existing legacy products that you want to move to the cloud or want to develop cloud-native applications, or both.

HSDP provides the services, technical tools and resources optimized for the creation and rapid development and deployment of connected healthcare and life science applications. HSDP provides a curated marketplace of foundational cloud services, such as databases and queues to support a wide variety of solutions.
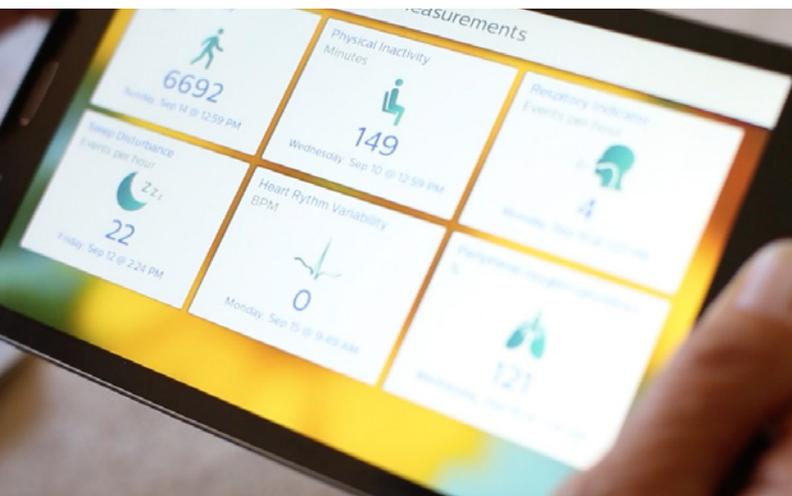
Philips HealthSuite Digital Platform
Cloud expertise and curated services to unlock data

- ✓ Build and deploy healthcare solutions
- ✓ Connect devices and data
- ✓ Store and share data securely
- ✓ Aggregate clinical and consumer data
- ✓ Support analysis
- ✓ Create solutions that make data actionable

Solutions layer — Clinical and consumer applications & devices

PHILIPS HSDP™

Services layer
Curated services based on your unique needs

Connect — **Share** — **Store** — **Authorize** — **Host** — **Analyze**

Infrastructure layer — Orchestration – Serverless Computing – Security – Cloud Hosting – Container Service
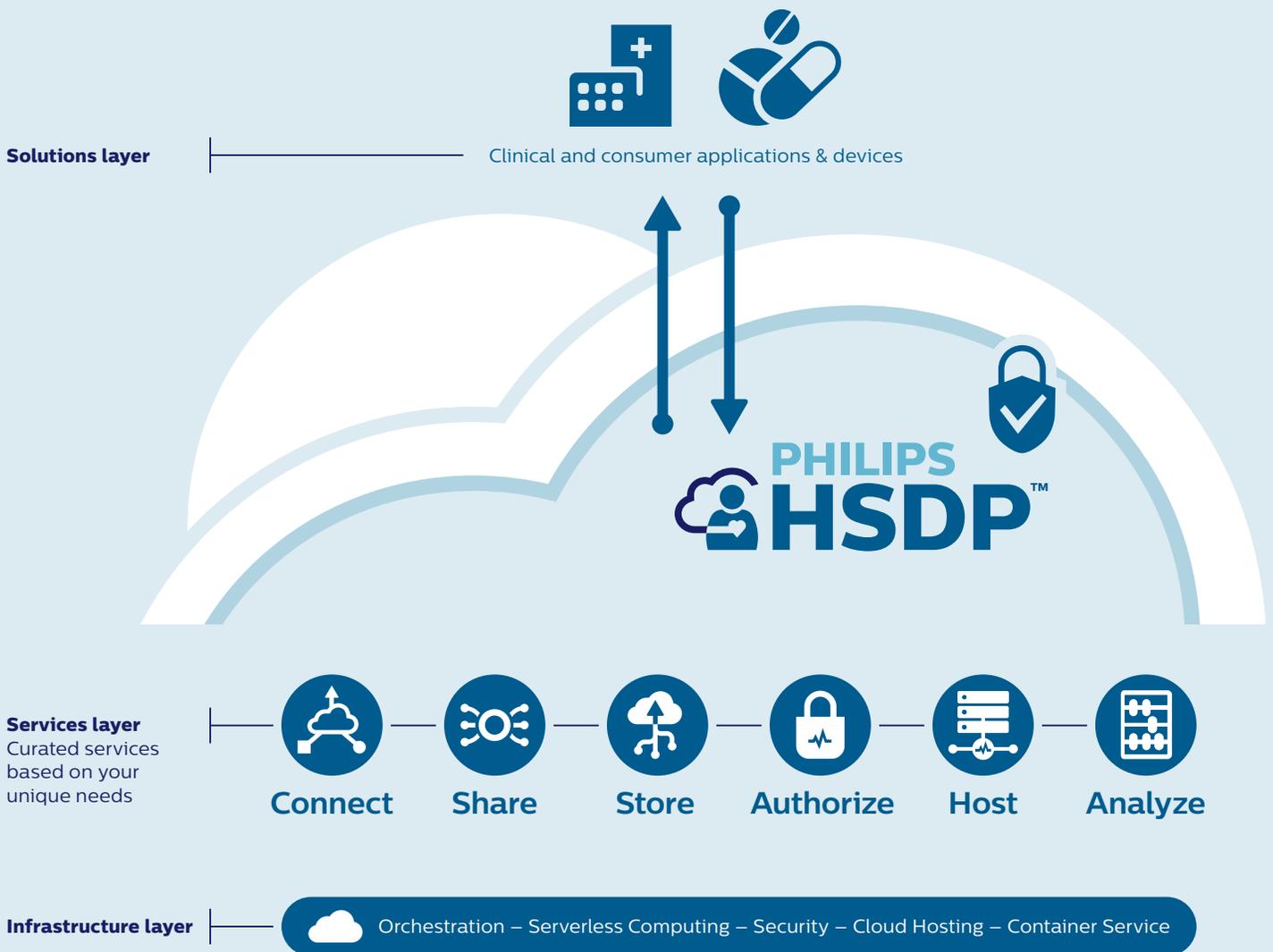
Philips HealthSuite Digital Platform
Services layer

Connect

Our secure and scalable IoT services to manage, update, monitor and collect data from smart devices.

Value

- **Device management:** Highly scalable and secure services to manage connected devices for remote service, diagnostics,software updates, messaging, and device control
- **Collect health and wellness data:** Collect, store, validate,correlate and broker both personal (health) measurements and observations as well as device information and data
- **Third-party data integrations:** Access a wealth of data from third-party services and devices through Philips' partnerships with other industry platforms

Store

Our service to acquire, manage and archive consumer and clinical data from applications and devices through secure cloud-hosted repositories.

Value

- **Managed service:** Use a host of features and advantages that come with a managed service, rather than a raw brokered service
- **Collect and store data:** Data from users, health and wellness devices, and clinical datastores across the health eco-system in a managed cloud repository
- **Open APIs:** Facilitate access to health data from multiple sources (devices, applications, systems) and enable faster development of consumer and professional applications
- **Data Security:** Secure and encrypted storage capabilities, access control and healthcare compliant auditing and logging focused on providing requisite privacy and security of personal and clinical data

Share

Our standards-based interoperability between enabled apps and devices with third party systems via FHIR and HL7.

Value

- **Rapid and scalable integration:** Provides a high performing integration engine with many built in capabilities to provide semantic interoperability, connecting On-premise with the cloud API based systems
- **API based flexible framework:** Out-of- the-box support for REST based APIs, with support for a variety of message mapping and routing capabilities and custom integration to standard and application-specific workflows
- **Flexible messaging format support:** Supports variety of messaging formats, such as HL7 (version2 and 3) to HL7 FHIR, and enables integration with systems based on well-defined XML, JSON and other proprietary formats

Authorize

Our secure identity and access management with a unified view into security policy, authorization, consent and data privacy.

Value

- **Enterprise-identity approach:** IAM provides capabilities for harmonizing multiple applications built on HSDP, enabling clients to use a single identity across multiple applications
- **Standard identity management workflows:** Standards-based identity, authentication and authorization capabilities to eliminate redundant, error-prone, and often incomplete (re)-implementation of standard workflows
- **Cross-platform integration:** Centralized set of enterprise identity and access management mechanisms that enable identity integration across consumer or healthcare applications built on HSDP
- **Collaboration with third parties:** Support integration and collaboration with third-party applications and services through federation and single sign-on capabilities

Host

Our core services for cloud-native development and managed infrastructure in order to deploy and continuously monitor application performance and the health status of systems.

Value

- **Marketplace of building blocks:** Commonly used services, including databases and queues, in an environment that meets security and privacy regulatory requirements
- **Auditing and logging:** Enhanced debugging efficiency, traceability, and compliance with privacy, security, regulatory standards for applications being developed
- **Specialized services:** Services to increase developers' visibility into application activity
- **Notifications and configuration:** Facilitations and loosely coupled integrations with other services
- **Environment for cloud-native development:** Environment that meets regulatory requirements to support you in rapidly developing and testing cloud-native applications

Analyze

Our framework to ingest and manage data, execute ETLs and analytics applications, and visualize data.

Value

- **More data, more insights:** Provides the ability to develop big data analytics solutions to help derive predictions and meaningful insights
- **Simplification:** Reduces the complexities of building and maintaining distributed big data computing environments by providing a common set of tools to ingest, transform, and extract data for advanced data visualization

Leading cloud expertise and regulatory compliant cloud infrastructure

HSDP meets the privacy, security, and regulatory requirements needed to protect an individual's sensitive data.

CSA STAR ATTESTATION

asipsanté

HITRUST

HIPAA

COALFIRE ISO 27001 CERTIFIED ISO

COALFIRE ISO 27018 CERTIFIED ISO

GDPR

AICPA SOC
aicpa.org/soc4so
SOC for Service Organizations | Service Organizations

ISO 13485
DEKRA certified

HealthSuite digital platform **by the numbers**[*]
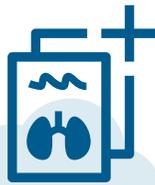
Billions
of images archived

Petabytes
of imaging studies archived for healthcare providers

Millions
of IoT devices connected

Hundreds
of features on the platform

[*] Based on internal Philips data

How do you use HSDP

And what does it help you do?

New native cloud development

Looking to create a new native cloud solution from scratch?

Use HSDP's managed, compliant cloud platform as a service to build and deploy your new solution using our Cloud Foundry environment and HSDP platform services.

Legacy solutions

Have a legacy application or solution to move to the cloud?

Host your application on our cloud infrastructure with 24 x 7 operational support.

Combination of native cloud development and legacy solutions

Have a mix of legacy and native cloud development?

Use our services in flexible ways to address your varying needs. Take advantage of containerization that allows you to use your legacy components in combination with cloud native services.

PHILIPS
HSDP™

Powering innovations with HealthSuite digital platform

Philips HSDP provides the technical tools and services to create innovative healthcare and life science applications that can deliver a more personalized care experience for individuals and health and wellness professionals.