

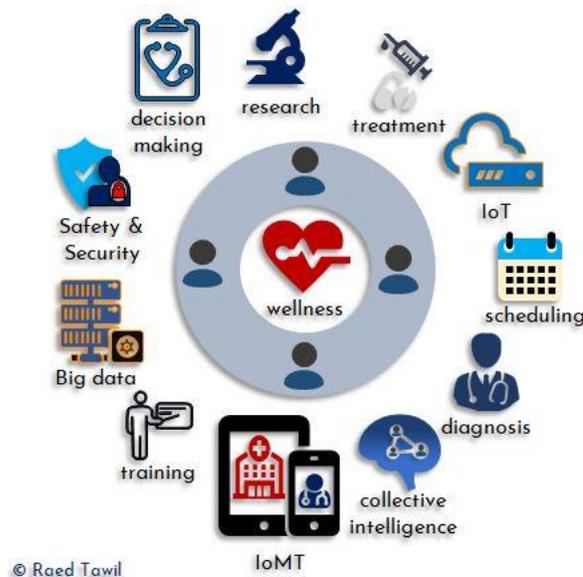
# Healthcare interoperability

-Raed Tawil

## PARADIGM SHIFT

Thomas Kuhn introduced the concept of "paradigm shift" in his book *The Structure of Scientific Revolution*. Kuhn argues that scientific advancement is not evolutionary but rather is a "series of peaceful interludes punctuated by intellectually violent revolutions", and in those revolutions "one conceptual world view is replaced by another".

## Embracing AI in healthcare



Embracing AI and machine learning in healthcare will provide

- expedited drug development and improve drug testing
- better evidence-based treatment
- wearables and chatbots for better patient care and follow-up
- accurate diagnosis
- telemedicine
- broader access to healthcare

The healthcare industry is in great need of a paradigm shift in order to improve the quality and efficiency of healthcare.

It is well known that healthcare systems are highly complex and fragmented. They use multiple information technology systems and vendors incorporating different standards, therefore resulting in inefficiency, waste, and medical errors.

A patient's medical information often gets trapped in silos of legacy systems, to be shared with extreme difficulty among members of the healthcare community.

There is a great demand to leverage existing investments in healthcare applications and take advantage of myriad advancements in telecommunication and technology standards.

RKTEK's knowledge and experience with e-Health technology can help to realize this vision with aiding in the analysis and design of an infrastructure to resolve the challenge of interoperability and collaboration among the healthcare stakeholders.



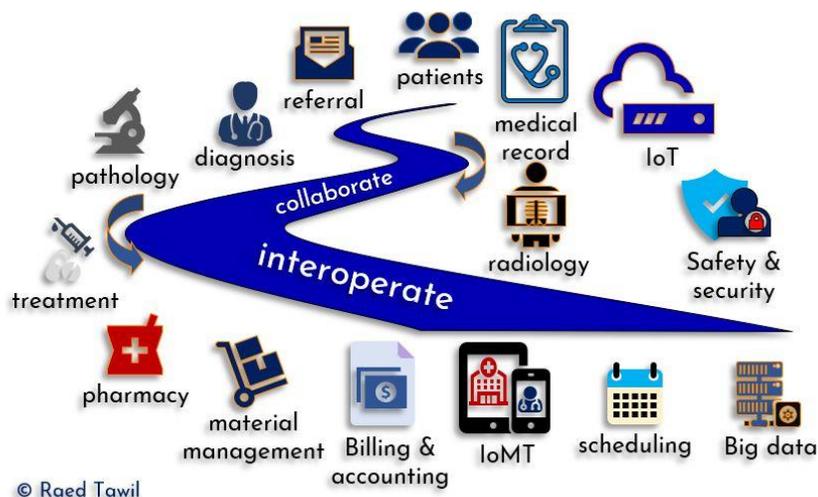
## Collaborate to interoperate

### Order from chaos

A closer look at IT systems within an enterprise will reveal a complex set of heterogeneous systems, most of which are islands of automation. The full reliance of businesses on these systems to conduct their operations mandates them to be harmonious with the changing business operations they support, to achieve maximum agility and interoperability.

It is only through a methodical and holistic approach that we can bring order to IT chaos. We offer fresh and methodical solutions that help organizations realize their mandates.

*In the world of IT, entropy dominates and chaos rules. We **RKTEK** order from chaos.*



The solution is service oriented and patient-centric. It is built to a federated architecture that enables the electronic movement of health-related information among organizations, according to nationally recognized standards. This allows the existing systems to maintain their autonomy locally, while inter-operating within a federated governance model which brings together healthcare stakeholders within a defined geographic area and governs health information exchange among them for the purpose of improving healthcare in that community.

Properly automating the healthcare formula:  
diagnosis + treatment = wellness  
eases the healthcare industry's adoption of artificial intelligence (AI).

RKTEK provides techniques for the analysis and design of an interoperability framework, a fit for purpose approach suited for an interoperative healthcare system.

The approach is driven at its core by roles and responsibilities, which in turn leads to better data collection and protection. The responsibility maps and profiles provide for clarity, accountability, and better KPIs to name a few.



**RKTEK**  
Order from chaos

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