TRANSFORMING
HEALTHCARE
By Leveraging Skills

Presented by Feras Kamal
Chief Executive Officer

www.ehs.com.jo

ELECTRONIC HEALTH SOLUTIONS (EHS)

ABOUT EHS

EHS is a non profit company that aims to transform and sustain a continuously improving healthcare system in Jordan by leveraging technology.

EHS was Launched under the patronage of his Majesty King Abdullah II in 2009.

OUR OWNERS

Shareholdings Management Company

King Hussein Cancer Foundation
King Hussein Cancer Center

Royal Health Awareness Society

EHS PROGRAMS

2009

Aims to automate the public healthcare sector in Jordan by implanting Electronic Health Record (based on VistA-EHR), offering a single record per patient nationwide that can be accessed through patient's ID number.

2013

The Electronic Library of Medicine was launched to provides healthcare professionals in Jordan with the latest evidence-based medical resources for free.

2015

Aims to build local capacity and provide education in the area of health informatics for individuals in the health sectors, university students, and EHS employees.
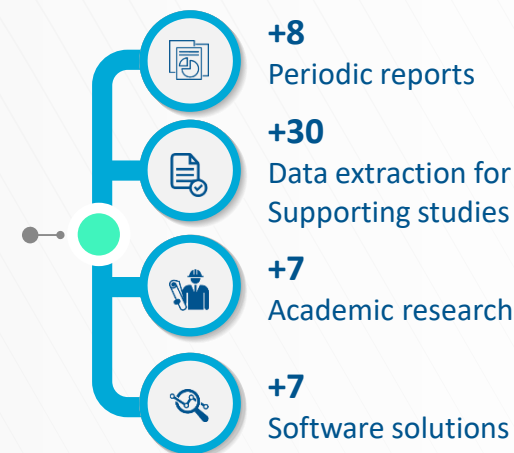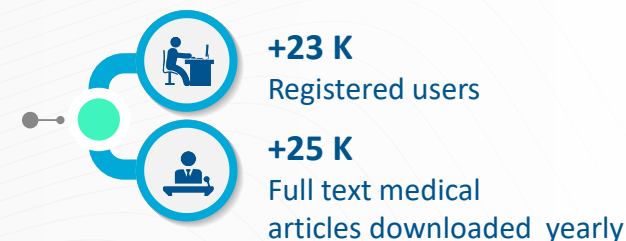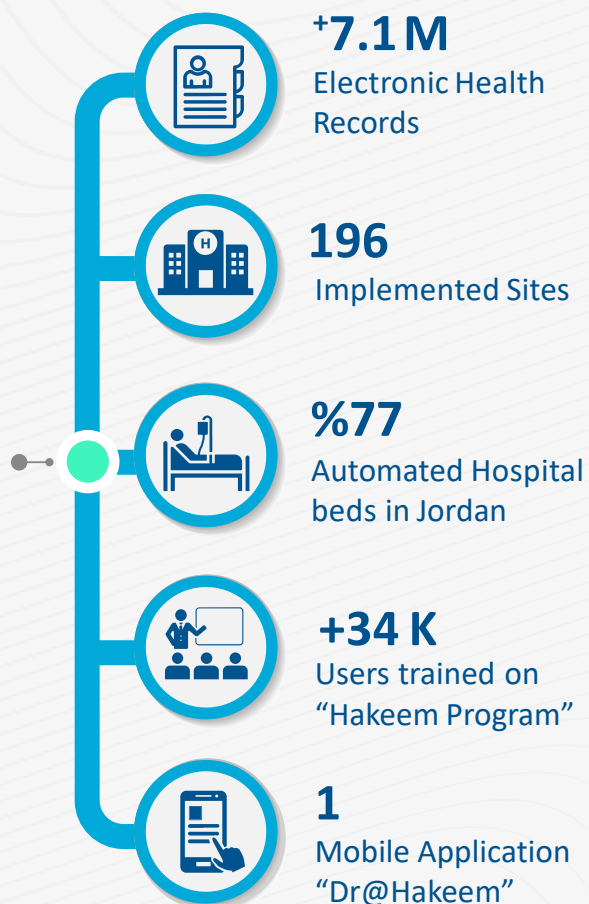
2019

Established to support researchers and decision makers in Jordan by leveraging Hakeem Big Data and utilizing business intelligence tools as well as analytical expertise.

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EHS BY NUMBERS

+7.1 M
Electronic Health Records

196
Implemented Sites

%77
Automated Hospital beds in Jordan

+34 K
Users trained on "Hakeem Program"

1
Mobile Application "Dr@Hakeem"

Hakeem
National E-Health Program
البرنامج الوطني لحوسبة القطاع الصحي

Electronic Library of Medicine - Jordan
مكتبة الأردن الطبيّة الإلكـترونيـة
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+23 K
Registered users

+25 K
Full text medical articles downloaded yearly

أكاديمية حكيم
Hakeem Academy
Health Informatics Development Academy
أكاديمية تنمية مهارات المعلوماتية الطبية

+3 K
Students trained on health informatics

7
Signed MOU's with Jordanian universities

HDA هدى
تحليل البيانات الصحية
Health Data Analytics

+8
Periodic reports

+30
Data extraction for Supporting studies

+7
Academic research

+7
Software solutions

24/7
Technical Support

310
Professional Employee

Accreditations ISO QSCert 22301 | ISO/IEC QSCert 27001 | SGS | SNOMED International Leading healthcare terminology worldwide

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Note: These numbers have been updated on March 2020

EHS'S AREAS OF EXPERTISE

MERGING HEALTH WITH TECHNOLOGY

AREAS OF EXPERTISE

1. Hardware & Network Infrastructure
2. Business & Continuity Service Management Centre
3. Health Analytics
4. Software Development integration &
5. Change management Clinical & Transformation
6. PMO & Implementation Life cycle
7. Prof . Services Consultancy &

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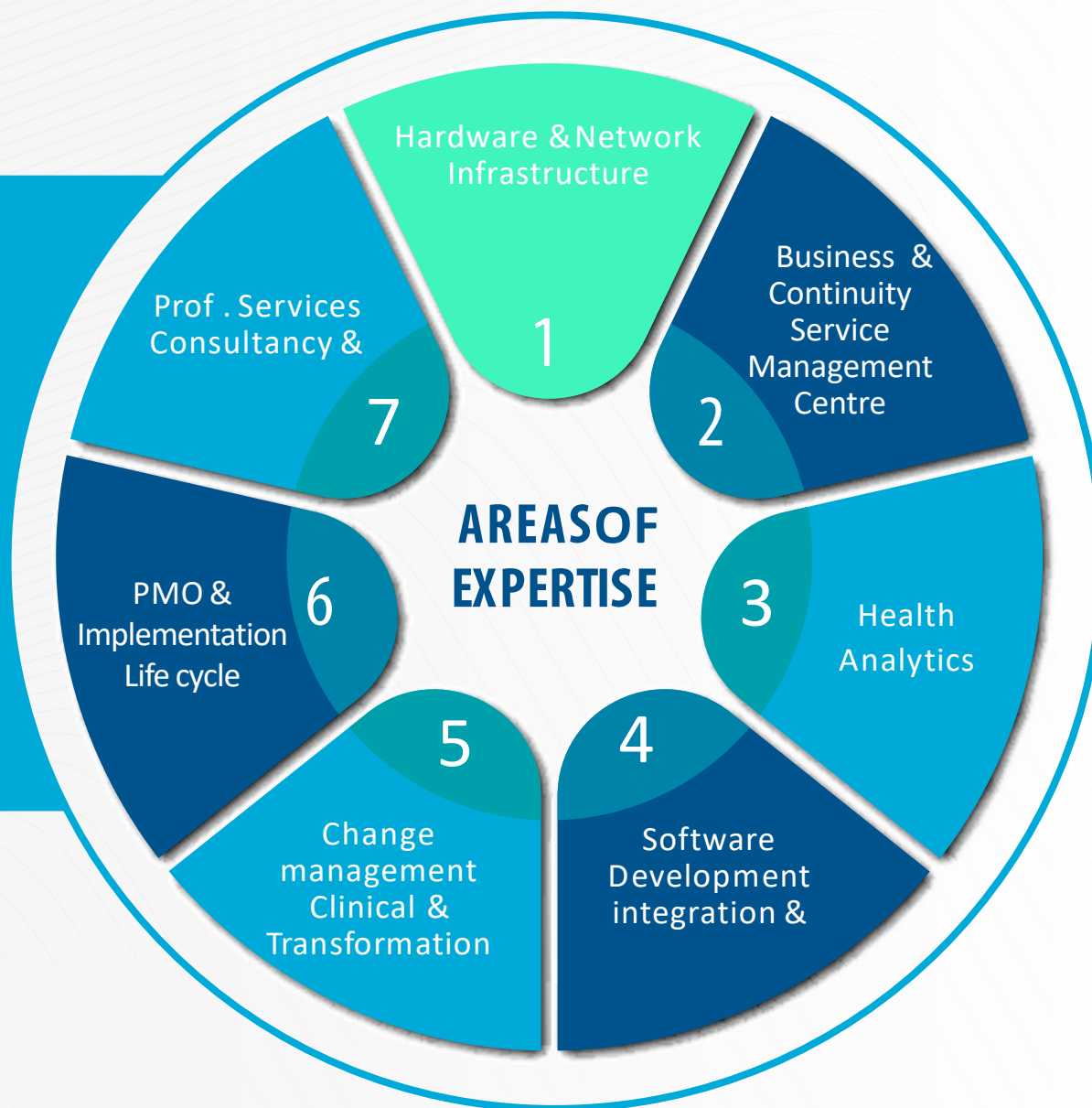
EHS'S IMPACT ON THE JORDANIAN ECONOMY

MANPOWER AT ELECTRONIC HEALTH SOLUTIONS

Women empowerment

Electronic Health Solutions has been continuously seeking to strengthen the role of women and presenting EHS as a success story in women's empowerment; to date, %30 of EHS workforce are females from different areas of expertise (IT, medical, administration etc..) and the number is gradually increasing on yearly basis.
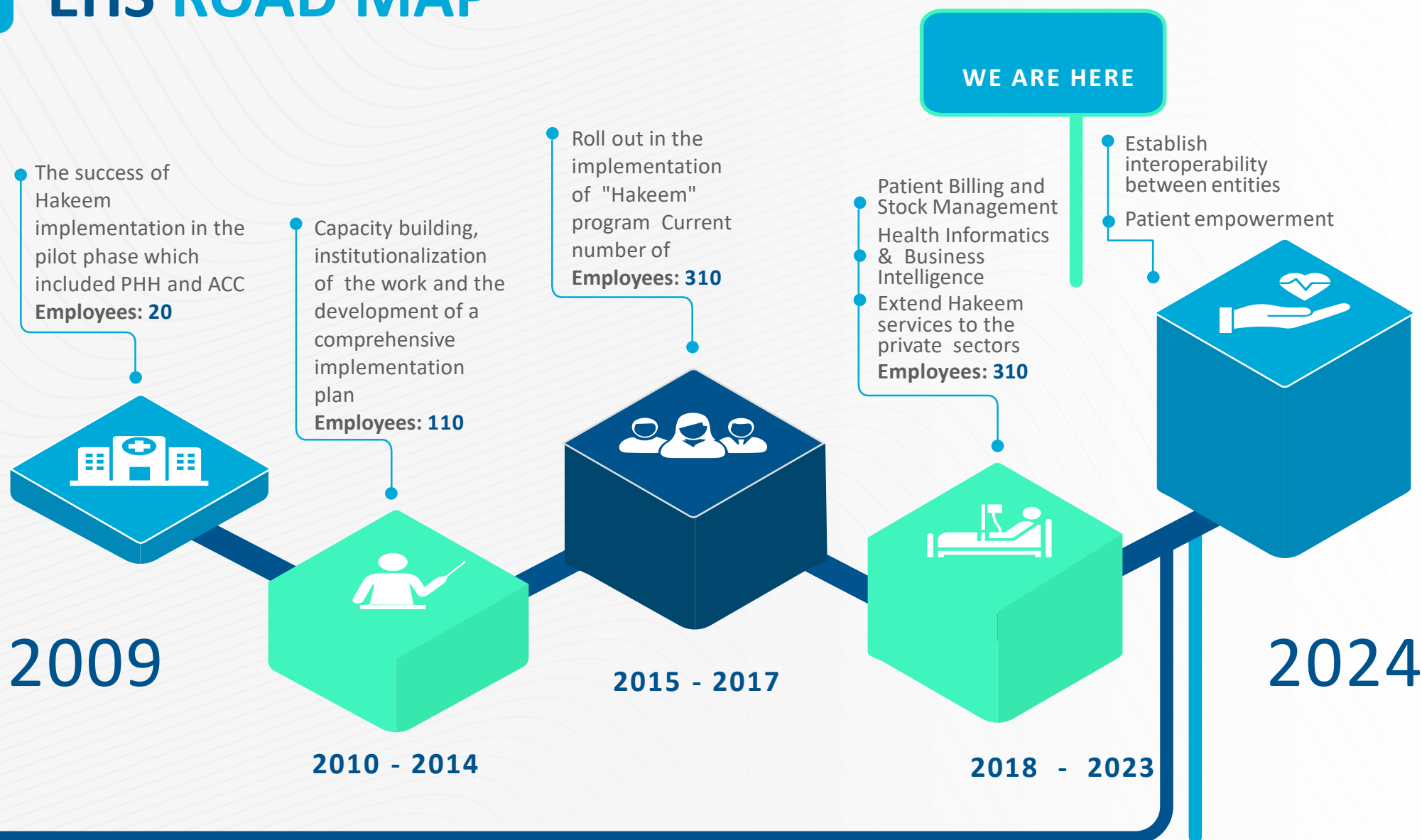
YOUTH

- Youth play a big role in the workforce in Jordan. At EHS the total number of employees is 310 which of %75 are between the ages of 22 and 35.

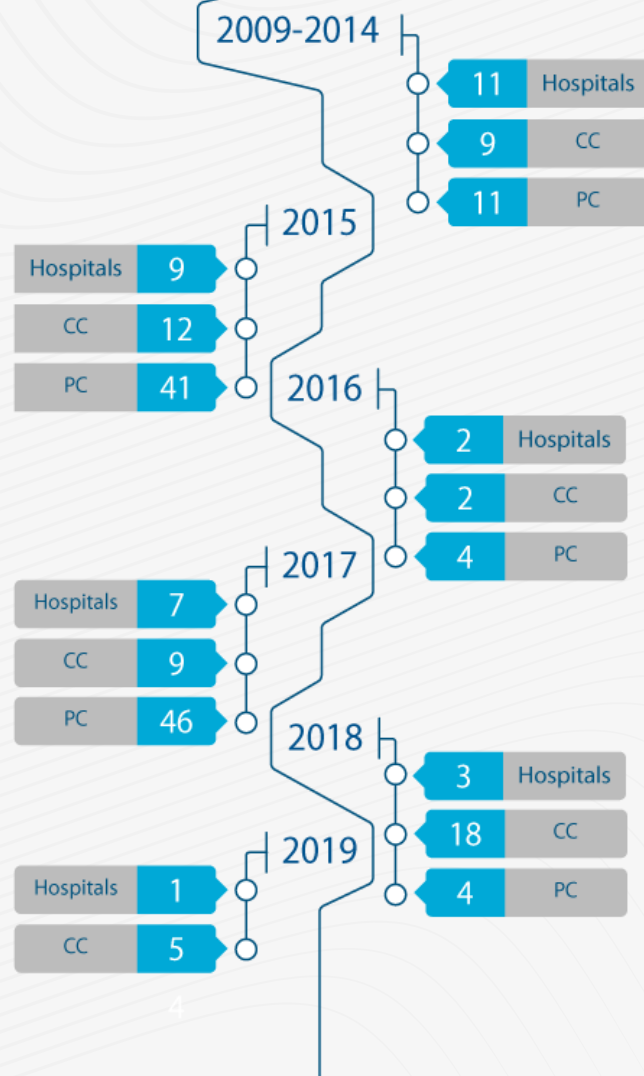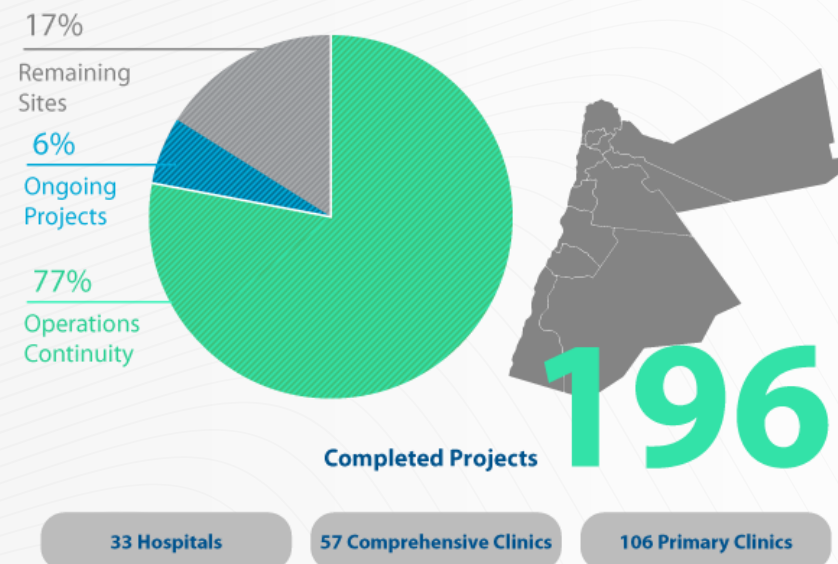## Women's Leadership Role in EHS in comparison with males

% 3 4 **Managers**

% 3 1 **Seniors**

%21 **Team Leads**

● Managers   ● Team Leads   ● Seniors

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EHS ROAD MAP

WE ARE HERE

The success of Hakeem implementation in the pilot phase which included PHH and ACC
Employees: 20

Capacity building, institutionalization of the work and the development of a comprehensive implementation plan
Employees: 110

Roll out in the implementation of "Hakeem" program Current number of
Employees: 310

Patient Billing and Stock Management

Health Informatics & Business Intelligence

Extend Hakeem services to the private sectors
Employees: 310

Establish interoperability between entities

Patient empowerment

2009

2010 - 2014

2015 - 2017

2018 - 2023

2024

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HAKEEM IMPLEMENTATION

Hakeem program implementation by numbers

2009-2014
- 11 Hospitals
- 9 CC
- 11 PC

2015
- Hospitals 9
- CC 12
- PC 41

2016
- 2 Hospitals
- 2 CC
- 4 PC

2017
- Hospitals 7
- CC 9
- PC 46

2018
- 3 Hospitals
- 18 CC
- 4 PC

2019
- Hospitals 1
- CC 5

Weight of Hospital Beds

- 17% Remaining Sites
- 6% Ongoing Projects
- 77% Operations Continuity

Completed Projects 196

| 33 Hospitals | 57 Comprehensive Clinics | 106 Primary Clinics |

Automated sites for 2020

Comprehensive Clinics	2
Hospitals	4
Comprehensive Clinics	2

● COMPLETED   ● ONGOING PROJECTS

Note: This map has been updated on June 2020

Hakeem
National E-Health Program
البرنامج الوطني لحوسبة القطاع الصحي

KNOWLEDGE TRANSFER
CRTITICAL TO SUCCESS

KNOWLEDGE TRANSFER

| Conducting systematic workshops, offline and online training classes | Consultants & short term experts | On site mentoring & shadowing | Collaboration with WorldVistA, Regenstrief, SNOMED etc.. |

DOCUMENTATION & STANDARDIZATION

IMPLEMENTATION & BUSINESS CONTINUITY

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HEALTH DATA ANALYTICS
PROGRAM - HDA

The program was developed to support and empower both researchers and decision makers in the health sector in Jordan, by facilitating the process of extracting reliable information in an integrated and comprehensive manner through offering technical solutions, and data mining tools for better decisions.
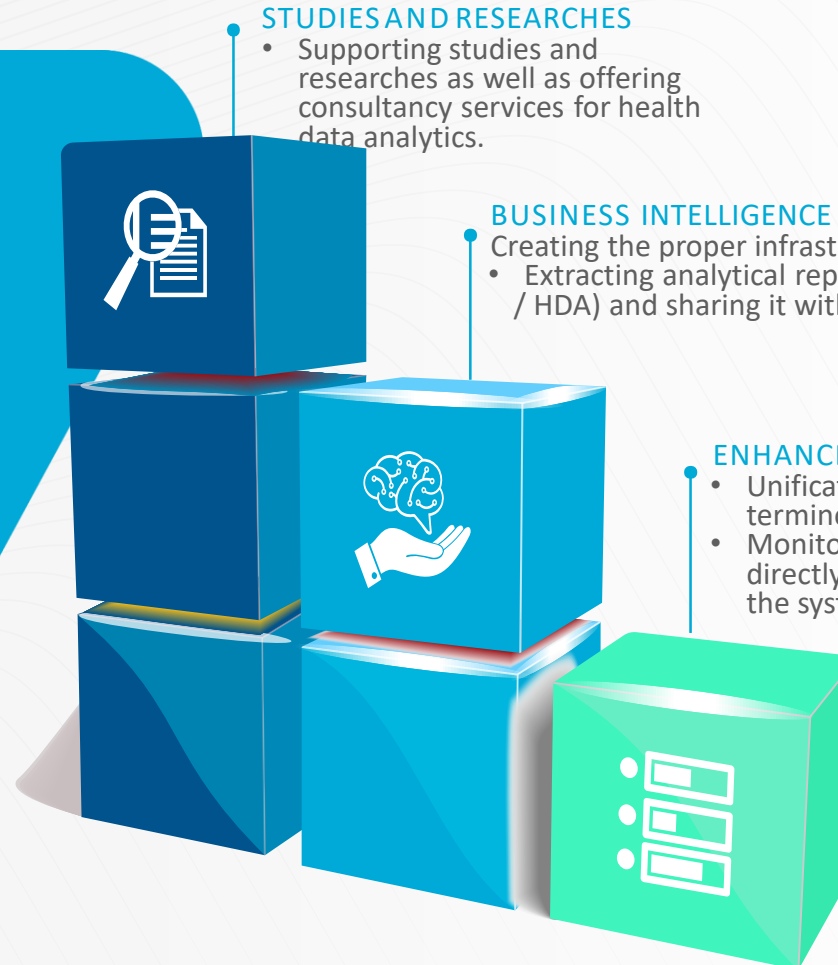
STUDIES AND RESEARCHES
- Supporting studies and researches as well as offering consultancy services for health data analytics.
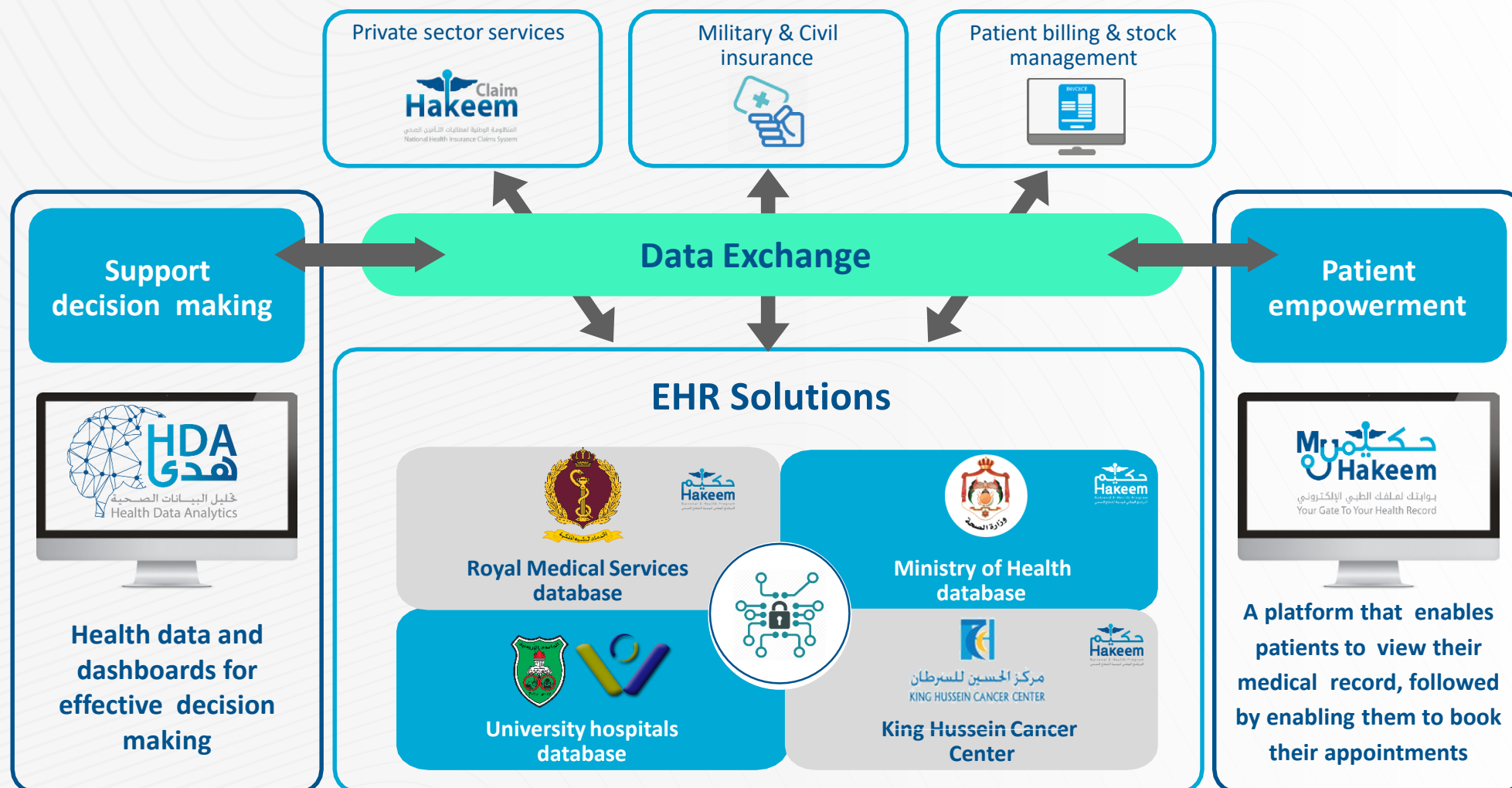
BUSINESS INTELLIGENCE SOLUTIONS
Creating the proper infrastructure:
- Extracting analytical reports & data (Hakeem / HDA) and sharing it with authorized entities.

ENHANCE DATA QUALITY
- Unification of medical terminologies
- Monitor data input that directly affects the KPI's on the system.

EDUCATION AND KNOWLEDGE

Hakeem Academy
Health Informatics Development Academy
أكاديمية تنمية مهارات المعلوماتية الطبية

علم
Electronic Library of Medicine - Jordan
مكتبة الأردن الطبّية الإلكترونية
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+23K
Active users on ELM.jo

Collaboration	Innovation	Training and Capacity building
7	**+36**	**3500**
MOU's	Startup Projects	Students

Collaboration
- Signing MOU's with major Jordanian universities to collaborate & exchange expertise in the health informatics & innovation fields

Innovation
- Hakeem Academy annual competition in the fields of health informatics & technology
- Mentorship sessions training & support

Training and Capacity building
- Awareness sessions and capacity building
- Training on Hakeem packages and applications
- Encourage innovation in the field of health informatics

+20 Main medical publishers

+8700 medical journals and resources

325 Average daily logins

45 minutes average stay duration per visit

Note: These Numbers has been updated till June2020

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HAKEEM ACADEMY AREAS OF COLLABORATION WITH UNIVERSITIES

Integration with an existing curriculum in universities

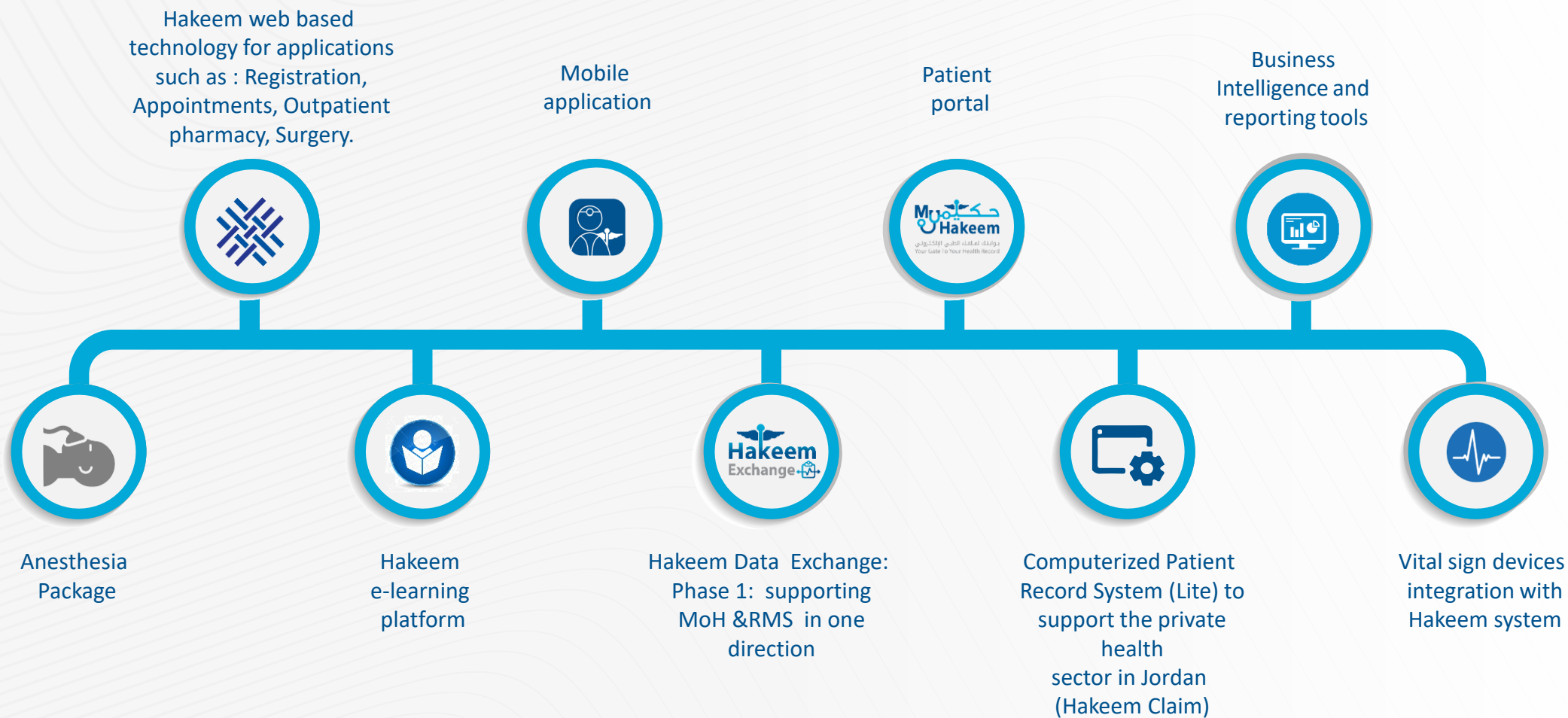**Hakeem Lab**

Health Informatics Curriculum

Hakeem Academy Annual Competition (HAAC) for innovation in the field of health informatics

Online platform
Hakeemacademy.jo

INNOVATIVE SERVICES
AND NEW PRODUCTS

Hakeem web based technology for applications such as : Registration, Appointments, Outpatient pharmacy, Surgery.

Mobile application

Patient portal

Business Intelligence and reporting tools

Anesthesia Package

Hakeem e-learning platform

Hakeem Data Exchange: Phase 1: supporting MoH &RMS in one direction

Computerized Patient Record System (Lite) to support the private health sector in Jordan (Hakeem Claim)

Vital sign devices integration with Hakeem system

EHS'S IMPACT ON THE
JORDANIAN ECONOMY

Creating Job Opportunities

- Offering equal employment opportunities for Jordanians from both genders with different academic backgrounds across all governorates in the kingdom.

Enhancing Healthcare

- Patient safety
- Improving health outcomes
- Providing necessary tools via health analytics (Preventive, Predictive & BI)

Financial Impact

- Financial saving and operational cost containment in relation to the public healthcare sector.

Building Capacity

- Improving the quality of human resources through mentoring and consultancy services in the area of health information technology.

Innovation & Giving Back

- Innovators in the area of health information technology regionally.
- Collaboration with the US open source VistA communities with regards to the internationalization of VistA.
- Collaboration with international firms such as (USAID, SNOMED, Regenstrief)

Internal & External Partnerships

- Working with IT vendors in Jordan in addition to HP, DELL, CISCO, Lenovo, Microsoft, Vitel net, Mirth, Fidelity, etc… to provide the best quality infrastructure for healthcare institutions that implement Hakeem program.

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THANK YOU

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