شركة وادي الرياض
Riyadh Valley Co

# Medical Technology Report


June 2022

شـركـة وادي الـريـاض
Riyadh Valley Co

# Introduction

As has been widely noted, COVID-19 has accelerated the adoption of technology across sectors. Having highlighted the healthcare sector's importance and systemic gaps, the health crisis has placed medtech on the centre stage. Incorporation of digital technology is expected to save costs by USD 1.5 trillion to USD 3 trillion by 2030[1].

Against this backdrop, medtech is witnessing increased investments and adoption. Global medtech market is expected to grow at a rate of 6.3% in the upcoming years[2]. Compared to other sectors, medtech has registered the highest percentage increase in venture capital funding in 2020 at 63%. Every quarter since 2020 has reportedly seen a higher inflow of funding than the preceding ones[3].

E-Health market in the Middle East and Africa was valued at $989m in 2019 and is projected to reach $1.8bn in 2024. Meanwhile, MENA is the fastest growing region in the Smart Health and Connected Hospital sector and is expected to be valued at $2.1bn by 2022[4]. MedTech in Saudi Arabia and broader GCC is set to grow on the back of increased healthcare expenditure and investor interest in the medtech space, government initiatives, higher private sector participation and prevalence of lifestyle diseases.

[1] McKinsey
[2] Medtech Pulse/BVMed/Frost&Sullivan
[3] Deloitte
[4] Global Ventures Report/Gulf Business



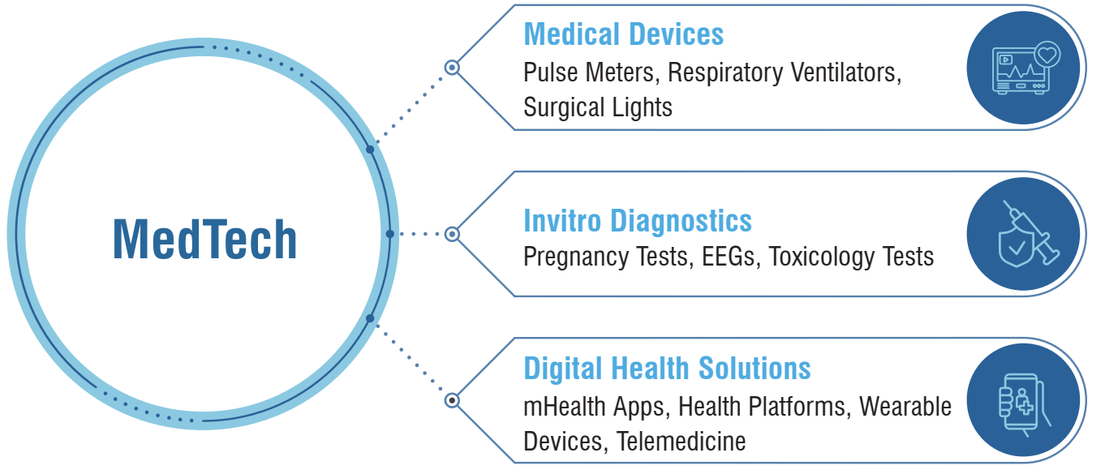


# Overview of MedTech

Medical Technology, or MedTech, is a broad discipline at the intersection between healthcare, medicine, and technology. It is concerned with the development of solutions for prevention, monitoring, diagnosis, treatment of health issues, as well as maintenance of the high quality of care.

MedTech products can be diagnostics tools, bionics, instrumentation, digital platforms, and more. They could be broadly classified into three categories.

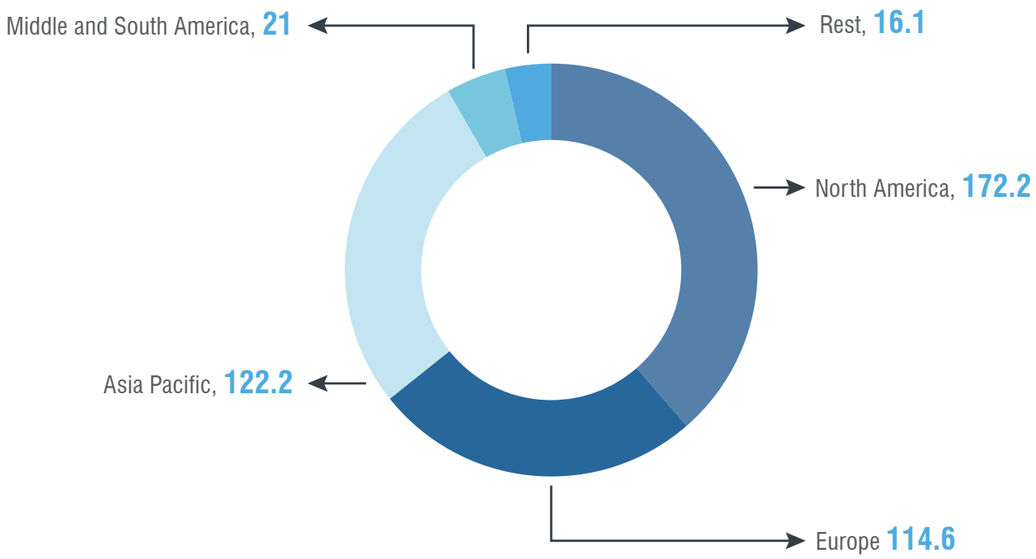
### Types of MedTech




*Source: Ideamotive; Note: EEG - Electroencephalogram*

Global MedTech market size in 2021 is estimated at USD 446bn. High barriers to entry, constantly evolving technology innovations, and considerable clinical and nonclinical unmet needs that are to be addressed would support the industry's growth.

## Global MedTech Market By Region (USD bn)




*Source: BVMed, Frost and Sullivan*

Health wearables are an important part of the growing digital health solution segment; global market for these health wearables is sizeable and is expanding fast. Interestingly, wearables history traces back to sketches of pedometer by Leornado Da Vinci in 1472. Some of the early products in health wearables include Philips Lifeline (2010), Ingestible digital health feedback by Proteus (2012).

### Utility of Wearable Tech in Healthcare

**15 hours /week**

Time saving for doctor whose patients use wearable tech

**13 disease related findings**

Identified by wearable tech, in a study with over 100 people

**88%**

Potential cost savings with using biometric devices to monitor patients with serious conditions

**16%**

Potential decrease in hospital costs by 2024

*Source: Centric Digital, Business Insider,Forbes*



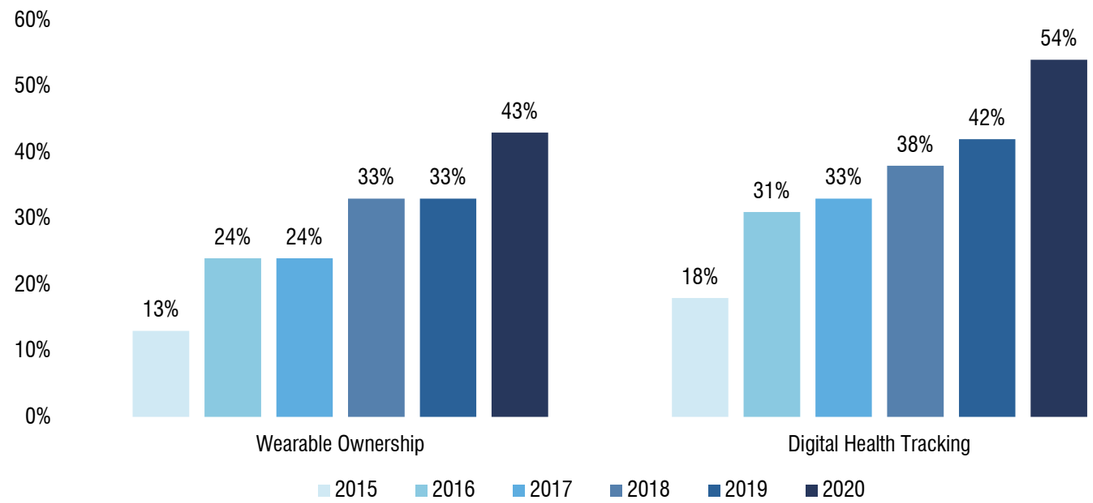
## Global Health Wearables Market (Number of units shipped globally in millions-2021-2024)




*Source: Deloitte*

Consumer attitude towards adoption of digital health has become more favourable over the years. Spurred by COVID-19, it had seen steep increase in 2020. Digital expectation of millennials and Gen Z, realisation of benefits by doctors in terms of timeliness of care, work satisfaction have supported adoption of tech in healthcare.

### Adoption Rate of Digital Health Tools




*Source: RockHealth; Note: Survey of representative sample of U.S adults*

Some value pools in digital health are ripe for innovation, with technologies associated with these expected to grow at a CAGR of over 8% per annum over 2021-2024. Care delivery comprises of 45% of overall digital health market and all its segments are set to grow by over 10%.

**Value Pools and Growth Rate Over 2021-2024**

| Category | Value Pool | Constituents | CAGR (2021-2024) |
|---|---|---|---|
| **Research and Development** | Enhance drug R&D processes | Artificial-intelligence and machine learning, drug discovery, siteless trials, protocol optimization, trial site operations, and patient engagement | 8% |
| **Wellness and Disease Prevention** | Improve wellness and stop disease | Sleep-tracking, meditation and fitness, and disease-prevention tools | 11% |
| **Screening and Diagnosis** | Intercept Disease by screening | Genomics and omics | 8% |
| | Identify the right patient | Digital at-home diagnostics Imaging diagnostics based on artificial intelligence and machine learning | 11% |
| **Care Delivery** | Provide more effective therapies | Clinical-decision support (CDS), adherence solutions, disease management, digital therapies, Electronic Medical Records (EMR) and claims data analysis, Electronic patient-reported outcomes (ePROs) | 10% |
| | Provide remote patient support | Telehealth, remote monitoring, digital information, digital communities, logistics and care navigation support | 14% |
| | Supply therapies to patients | Rx on boarding, digital pharmacies, supply-chain solutions for medical supplies | 15% |

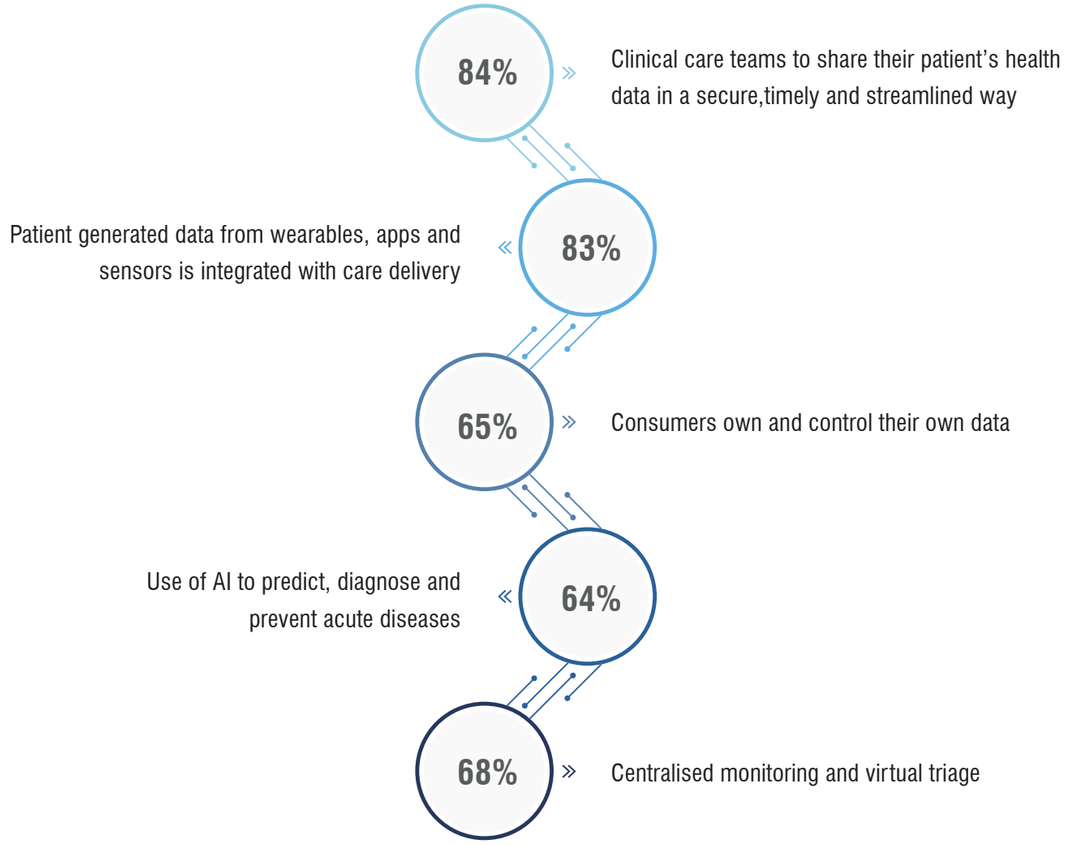


| Category | Value Pool | Constituents | CAGR (2021-2024) |
|---|---|---|---|
| **Finance and Operations** | Optimise the financial model | Value-based care arrangements, population health management, benefits administration | 18% |
| | Increase operational efficiency | Back-office simplifiers (e-Prescribe) Nonclinical workflow support for providers | 15% |

*Source: McKinsey*

Physicians expect integration of patient-generated data in care delivery and sharing of patient data in a secure streamlined manner to be standard practise in 5-10 years. However, data privacy is a key concern to be addressed. According to a Deloitte survey, about 40% of U.S consumers are concerned about privacy of the data their wearable collects.

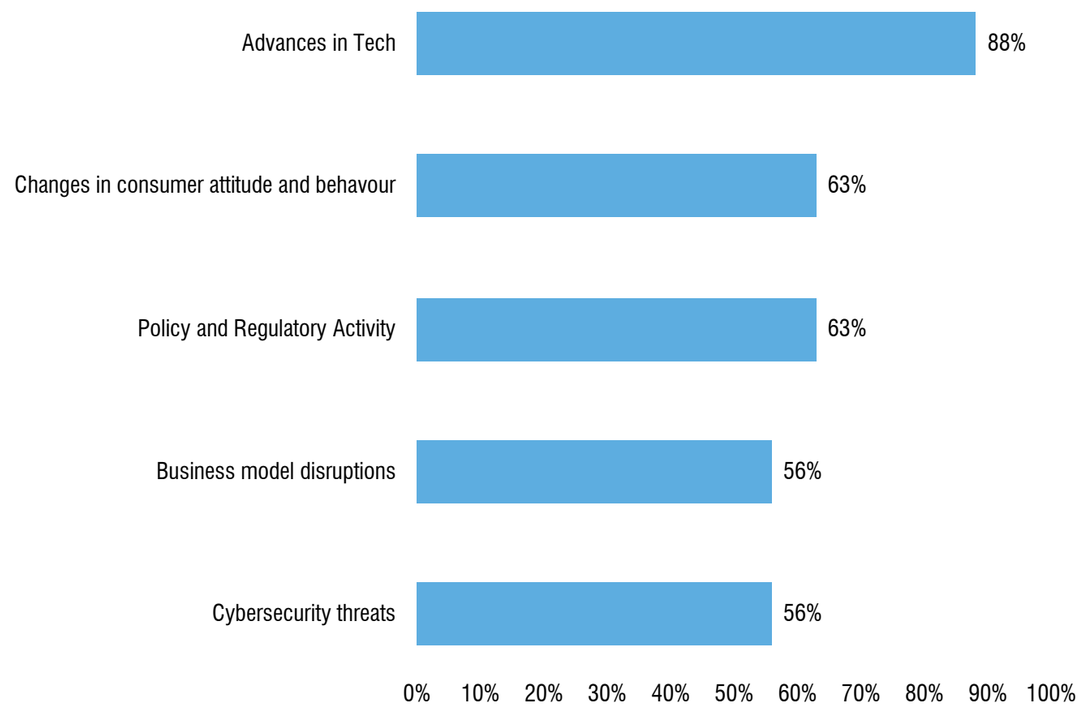
**Distribution of responses to survey on trends in care delivery that would become standard practice in 5-10 years**




*Source: Deloitte; Survey of 680 U.S Physicians (2020)*

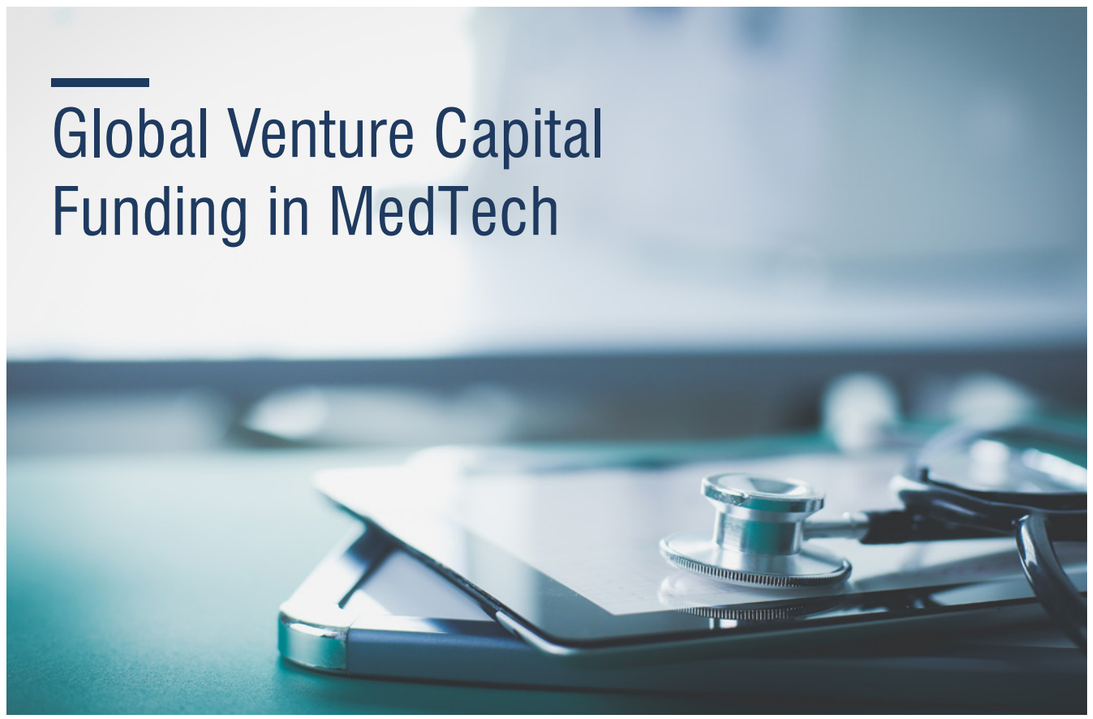
Adoption of advanced technology, policy and regulatory compliance and understanding consumer behaviour are seen as top issues by medtech companies. This could be seen in the light of additional investments required to keep up with digital investments as technology evolves, and possible slowdown in innovation with change in regulatory policies.

### Top Issues Facing MedTech Companies




*Source: Deloitte*

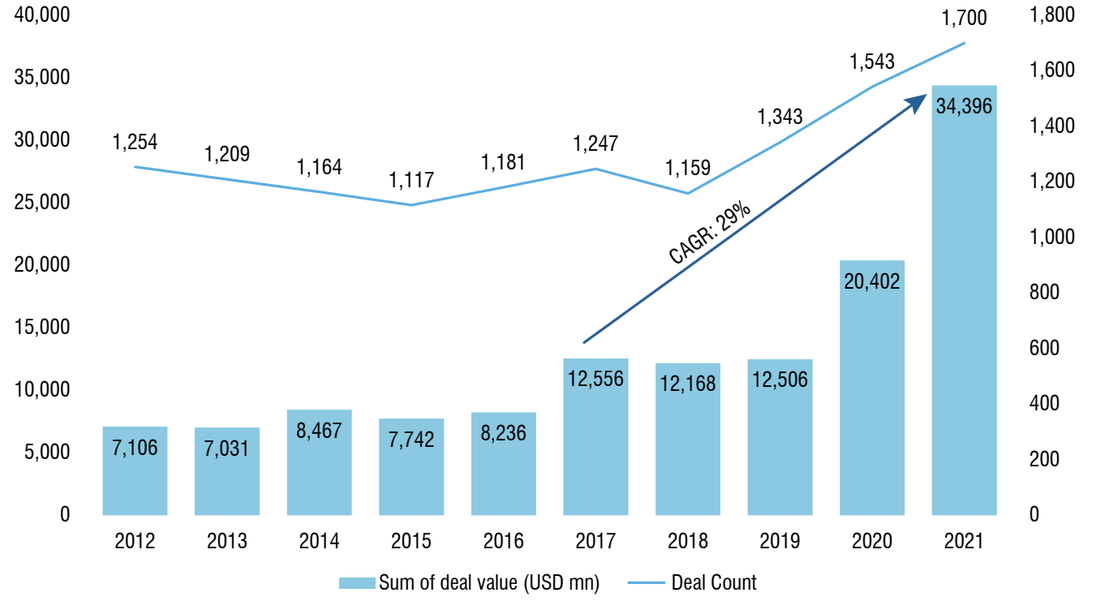




# Global Venture Capital Funding in MedTech

MedTech is seeing heightened investor interest with COVID-19 highlighting unmet healthcare needs. It has also seen the highest percentage increase in VC funding compared to other sectors.

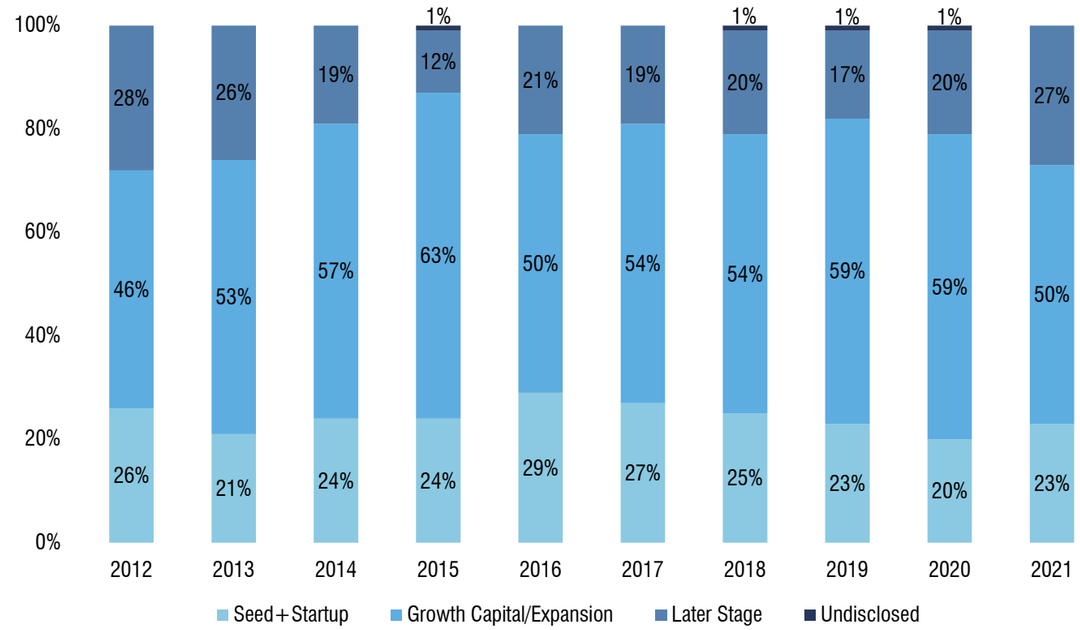
### Global VC Funding in MedTech Market (2012-2021)




*Source: Deloitte*

Mid and later-stage funding activity had seen higher proportion of investments in 2021, making up 50% and 27% of the total funding value. In general, VCs are investing in later-stage, more established companies where challenges related to clinical-trial data, regulatory approvals, and reimbursement are less of an issue.

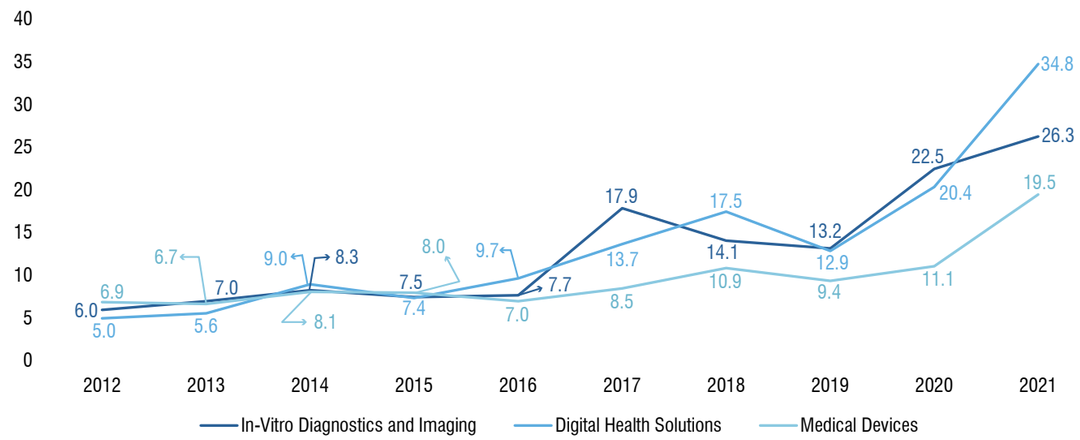
### VC Funding to MedTech by Investment Stage (2012-2021)




*Source: Deloitte*

Funding deal size has grown since 2012 across medtech segments. Of these segments, digital health solutions has seen the steepest growth since 2019.

### Average VC Funding Deal Size by Segment in USD million (2012-2021)



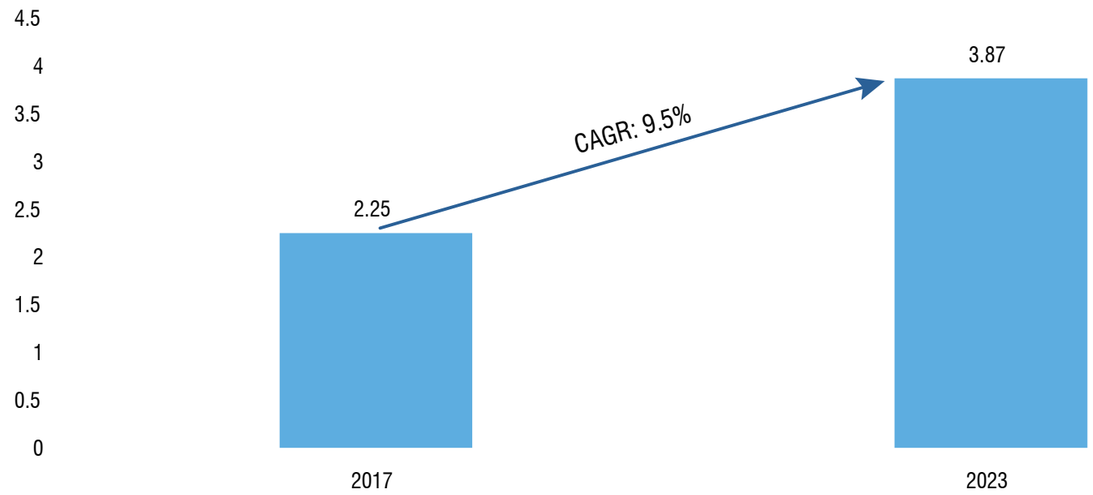

*Source: Deloitte; Note: These categories are not mutually exclusive*



# MedTech in Saudi Arabia

Saudi Arabia had developed its eHealth strategy in as early as 2010. It has seen periodic updates and has evolved into Digital Strategy Plan 2020. With healthcare being a part of Saudi Vision 2030, the country's medtech market is expected to see high growth.

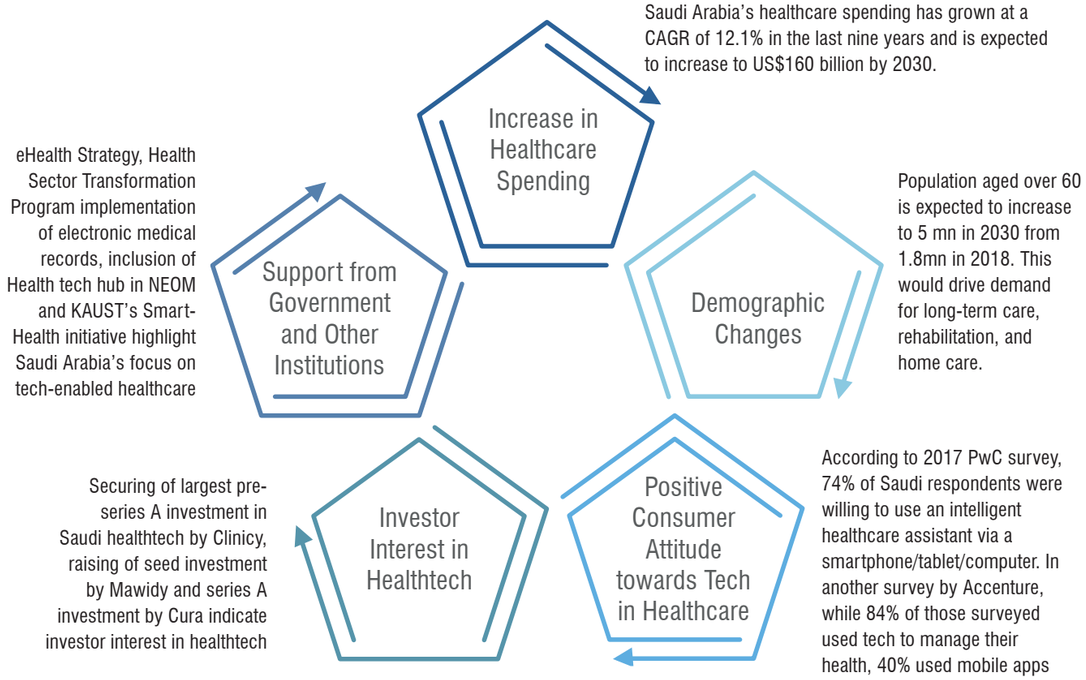
### Saudi MedTech Market in USD billion (2017 vs 2023)




*Source: PharmaBoardRoom*

In the backdrop of COVID-19 accelerated adoption of technology, Saudi Arabia provides a rich landscape for growth of medtech. Increasing trend in healthcare spending, favourable government initiatives among other factors are set to drive growth of medtech in Saudi Arabia.

## Growth Drivers for MedTech in Saudi Arabia




Saudi Arabia's healthcare spending has grown at a CAGR of 12.1% in the last nine years and is expected to increase to US$160 billion by 2030.

Population aged over 60 is expected to increase to 5 mn in 2030 from 1.8mn in 2018. This would drive demand for long-term care, rehabilitation, and home care.

According to 2017 PwC survey, 74% of Saudi respondents were willing to use an intelligent healthcare assistant via a smartphone/tablet/computer. In another survey by Accenture, while 84% of those surveyed used tech to manage their health, 40% used mobile apps and 14% used wearables.

Securing of largest pre-series A investment in Saudi healthtech by Clinicy, raising of seed investment by Mawidy and series A investment by Cura indicate investor interest in healthtech

eHealth Strategy, Health Sector Transformation Program implementation of electronic medical records, inclusion of Health tech hub in NEOM and KAUST's Smart-Health initiative highlight Saudi Arabia's focus on tech-enabled healthcare

*Source: ArabHealthOnline, PwC, Entrpreneur, KAUST, MoH, Saudi Gazette*

Digital health startups are coming up in Saudi Arabia. Some startups that raised funds recently include Nala (USD 1mn in 2019) , Cura (USD 15mn in 2021), and Clinicy (2021; sum undisclosed).

## Prominent Digital Health Startups in Saudi Arabia


*Source: HealthTechAlpha; Note: EHR-Electronic Health Records. PHR- Personal Health Records*





# Spotlight: Global Kinetics (GKC)

GKC is a commercial-stage digital health company, working towards improving the management of Parkinson's disease by providing continuous and objective measurement of patients' symptoms.

**Founded in – 2007**

**Headquarters – Melbourne, Australia**

**Other office locations – U.S, U.K**

### Key Highlights

1. GKC is one of Riyadh Valley Company's investment portfolio companies
2. To date, Global Kinetics has supported clinical decisions for doctors who have treated more than 30,000 patients with Parkinson's disease, generating more than 7,200,000 hours of clinical data and publishing over 25 peer reviewed clinical validation and utility studies from the FDA-cleared, CE-marked PKG wearable system.

### Product Offering: Parkinson's KinetiGraph (PKG)

GKC's Parkinson's KinetiGraph (PKG) is a mobile health technology that provides continuous assessment of the treatable & disabling symptoms of Parkinson's disease. PKG system is being used in clinics in U.S., Europe and Asia Pacific, enabling better clinical outcomes and reducing health care costs across the Parkinson's disease continuum[5].

### What it is?

- The PKG system consists of a wrist-worn movement recording device known as the PKG-Watch, proprietary algorithms and a data-driven report known as the PKG.
- The PKG provides objective, ambulatory and continuous, assessment of the treatable and disabling symptoms of Parkinson's disease including tremor, bradykinesia and dyskinesia.
- It also provides an assessment of daytime somnolence and an indication of propensity towards impulsive behaviours.

[5] GKC

# Conclusion

MedTechs have a role to play across the health spectrum – patient journey, prevention and wellness, screening and diagnosis, treatment decision and intervention, monitoring and management. The need for remote care of chronic diseases has become more relevant with the emergence of COVID-19, and medtech is at the forefront of delivering this new model, particularly with the rise of diagnostics and its integration with remote care delivery.

Interconnectedness of devices and systems, streamlining of data generated and its incorporation in care delivery are seen as key upcoming trends. In particular, data needs are high in personal disease management tools in terms of personalizing and optimizing patient outcomes and customising end user interaction. In this backdrop, cyber readiness and transformation of functions using digital and information technology are some of the top priorities for medtech companies in the coming years[6].

Consumer attitude towards adoption of medtech remains favourable, both globally and in Saudi Arabia. According to a survey by RockHealth, globally 73% of consumers are also willing to share health data with physicians, while about 52% are willing to share it with family and health insurer. However, users of wearables are also concerned about privacy of data that their wearable collects.

In the shadow of COVID-19, medtech is witnessing increased interest among various stakeholders and is likely to see tremendous growth. Globally, emerging leaders of medtech (companies with annual revenues below US$500 million) saw a 128% rise in public valuations between January 2020 and August 2021[7]. Venture Capital Funding in medtech segments continues to reach new highs. Private equity and mergers and acquisitions deal volume in medtech rose 7% to 584 in 2021, from 546 in 2020, and deal value rebounded 56% to $60 billion from $38 billion. In addition to means like VC, IPO and others, medtech companies are also raising funds through Special-Purpose Acquisition Companies (SPAC) mechanism.

Locally, successful capital raising by medtech start-ups are indicative of the segment's potential in Saudi Arabia. Factors such as government initiatives and customer attitude also seem to be favourable for the segment's growth in the country.





شـركـة وادي الـريـاض
Riyadh Valley Co

## Riyadh Valley Company

Riyadh Valley Company established in 2010 by Royal Decree No.116 dated 13/4/1431 AH to be the investment arm of King Saud University in the fields of Knowledge Economy and the university strategic projects.

## Vision

To be the regional leader in knowledge-based investment and technology.

## Mission

Riyadh Valley Company is a strategic investor, focused on leveraging the local capabilities, investing locally and globally in growth - stage businesses to create financial and strategic returns that will support the future of economic development in the Kingdom.

## Investment Sectors:

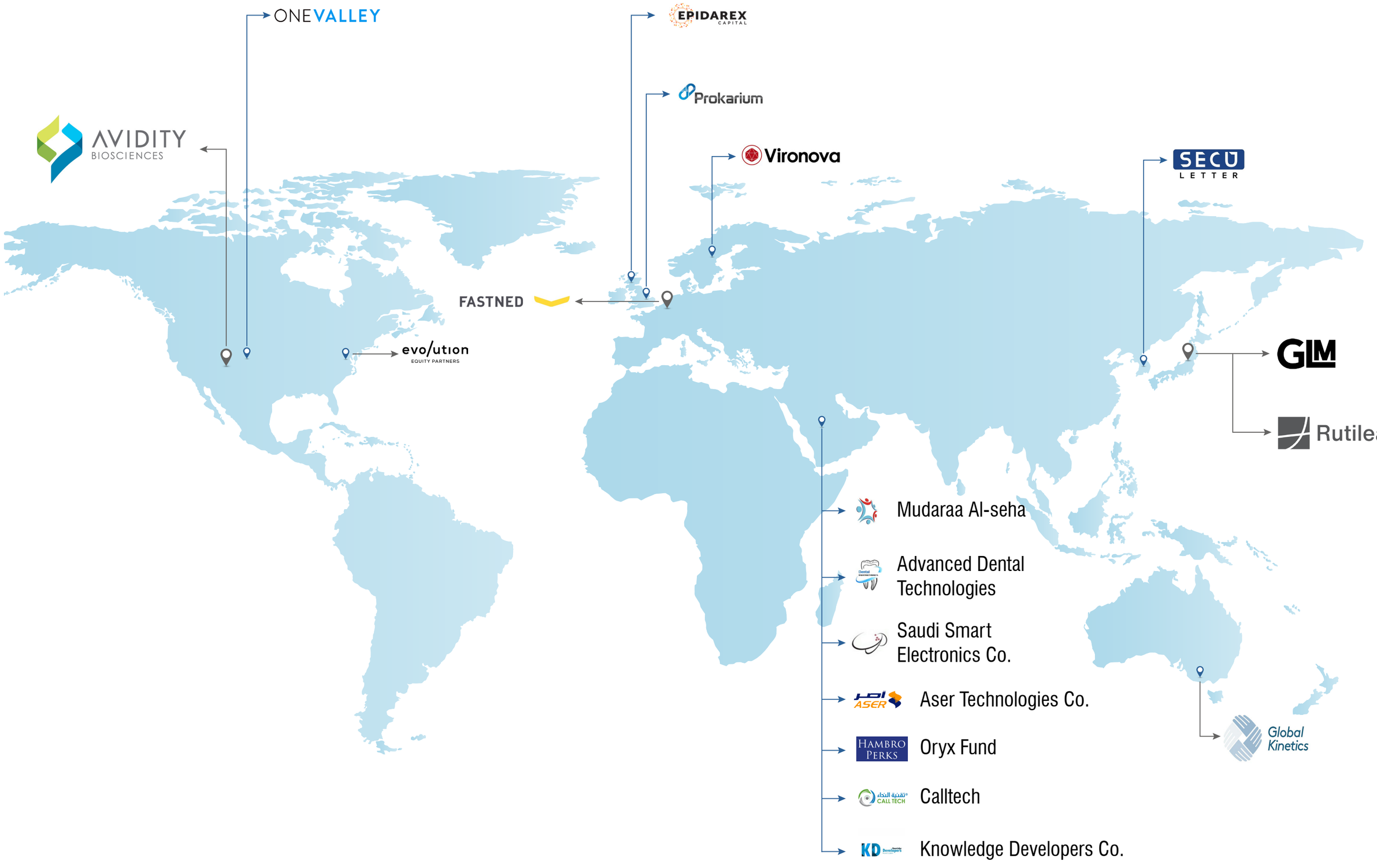
### Knowledge Investments

- Healthcare investment
- Renewable energy& sustainable recourses
- Information & Communication technology

### Real Estate Investments

- Innovation and R&D Projects
- Commercial Projects
- Educational Projects
- Residential Projects
- Healthcare Projects
- Mixed-use Projects

## Knowledge Investment Portfolio



# Real Estates Investment portfolio

## Sudair Pharma Company Project

Research center and company offices for Sudair Pharma Company

## ELM Information Security Company Project

Innovation Center project for Elm information security company

## Four Directions Company Project

Commercial and office project contains office buildings and multi-use halls

## Retail Real Estate Company Project

Social-Entertaining and sports project

## Derma Clinic Company Project (Residential)

Residential project for Derma Medical Clinics

## City Lights Real Estate Company Project

Entertainment-Commercial project contains screens on the building and architectural blocks, in addition to areas for live shows


## NMR Real Estate Company Project

Mixed-use project includes a hotel, restaurants and cafes

## Hamad Bin Mohammed Bin Saedan & Partners Investment Company Project

The project serves King Saud University Campus residents. It includes large areas where events that reflect Saudi culture are held

## Al-sorooh Al-Mubarakah Company Project

Mixed-use project contains office complex, Mall, Restaurants, cafes, and walkway for visitors

## Obeikan Company Project

Commercial project contains various stores near the Common First Year building


## Derma Clinic Company Project

Medical-Commercial project contains several medical clinics, medical products stores, and pharmacies

## Dur Alkuttab Company Project

Educational project for Primary Schools

## Arrowad For Higher Education Company Project

Educational complex, Arrowad colleges University campus in Riyadh

## Omnia Real Estate Development Company Project

Commercial project contains various shops


## Unified Real Estate Development Project

Cultural-Entertainment project that includes Luxury restaurants, Cafes, Cinemas and green spaces

## University Boulevard

Commercial-Entertainment project gives visitors a different experience, and it includes Restaurants and cafes

## Sahat Al-Ardh Company Project

A commercial project contains various shops


**Riyadh Valley Company**

Kingdom of Saudi Arabia, Riyadh – King Saud University, Innovation Tower

+96611 469 3219 | **www.rvc.com.sa** | info@rvc.com.sa

@riyadhvalley Riyadh Valley Company (RVC)