# NGN

# Module 6

## Case study 1

## Virtual Corporate Environment (Virtual Workplace)

A virtual workplace is a workplace that is not located in any one physical space and not tied to any geographic boundaries. Employees and management are connected via a private network or the internet and interact with each other via phone, Skype, cloud computing programs and a whole host of other virtual options. The rise in virtual workplaces (also called teleworking) began in the 20th Century as new technologies such as PCs, cell phones, voicemail, and of course the internet became commonplace. By the early 21st Century, people who worked at least one day at home per week increased by over four million, and today nearly half of working Americans say they spend at least some time working remotely, and all signs indicate virtual work will continue to grow.

**Working remotely has its advantages: -**

i) For many companies, virtual workplaces reduce overhead costs, and it is more sustainable. Having the ability to telecommute also saves on commuting costs such as fuel.

ii) Employers benefit from virtual workplaces by saving money on real estate and office costs. With everyone working virtually, there is no need for office space, supplies, electricity, etc.

iii) Another benefit is that working virtually is highly valued by millennials, the largest generation in the workforce. As the first generation to grow up with the internet, millennials are expected to embrace new technologies, virtual workplaces, schedule flexibility and work-life balance.

iv) Studies have also shown that employees who telework are more productive, less stressed and miss less work.

**Disadvantage: -** While there are many proponents of virtual workplaces, there are also those who feel that working virtually results in a sense of isolation among the employees, poor communication, and high susceptibility to distraction, among others.

**Tools which help a virtual workplace: -**

**a) Project Management**

Project management applications like Trello and Basecamp are a must! These applications help with the sorting and tracking of assignments, managing to-do-lists and they work across multiple platforms, computers, tablets and mobile, so you can have access wherever you go.

**b) Virtual Assistants**

The use of Virtual Personal Assistants (VPA) is one of the newer trends in the virtual workplace. Exactly as it sounds, VPAs are people who assist "virtually." VPAs do everything from keeping their manager's calendar up to date, to booking travel and making online purchases for the company.

**c) Conversation**

A chat tool is another must. Since working virtually means you can't just walk down the hall and ask a colleague a question, a chatting platform is the next best thing. Yammer is an example of one of the many private social media platforms that supports real-time communication and file-sharing, which is only available to employees in the network. Slack is another popular chat tool that allows for public or private messaging with team members. It essentially takes the place of "hallway" chats.

d) **The Cloud**

Cloud computing is the practice of using a network of remote servers hosted on the internet to store, manage, and process data, rather than a local server or a personal computer. Tools such as Dropbox and Google Suite allow employees and managers to collaborate virtually and have access to shared documents, calendars, drives, etc., that would otherwise have to be emailed or faxed constantly back and forth**.**

## Case study 2

## Virtual Classroom

A virtual classroom is a video conferencing tool where instructors and participants engage with each other and with the learning material. The difference with other video conferencing tools is that virtual classrooms offer an added set of features that are essential to a learning environment.

**Virtual classroom software enables instructors to:**

i. Moderate student participation
ii. Display learning materials in the form of documents, slide decks, or multimedia files
iii. Enrich the learning experience with screen-sharing and virtual whiteboard features
iv. Divide the participants into breakout rooms, which the instructor can join
v. Engage the participants with polls and quizzes
vi. Record the sessions (and manage those recordings)

A virtual classroom platform helps make the learning experience interactive and engaging while providing a controlled environment. But virtual classrooms also offer features that reach beyond the in-class experience. Instructors can access the classroom prior to the lesson to prepare the material. This material, as well as the session recording, is available after class, for reference for instructors and participants alike. Participants can connect to virtual classroom platforms from any device that can connect to the Internet. This type of flexibility enables participants to consume content, regardless of their location across the

globe. Another major benefit of virtual classroom software is that it facilitates student progress tracking. Instructors can consult data such as class attendance and student activity. They can track a participant's progress via online polls and analytics, identify areas of difficulty, and help the participant learn challenging subject matter with visual tools. Lastly, many virtual classroom platforms can be integrated within the school's or company's established learning management system (LMS). Advanced platforms support Learning Tools Interoperability (LTI) so that the virtual classroom system and the LMS can communicate with each other, making the whole greater than the sum of its parts.

**Here are key features every virtual classroom software should provide:**

a) **Easy access—**is key to help course participants learn course materials. When participants are required to install software or download plugins, they can experience difficulties. The result is a poor learning experience. Participants should be able to easily connect to digital tools, preferably using just a link and their credentials.
b) **A user-friendly interface—**is critical to help course participants use and navigate through digital learning tools. When the interface is simple and intuitive, participants can quickly enjoy classes and the relevant learning materials, communicate with instructors, and collaborate with classmates.
c) **Efficient learning—**instructors and content creators should be able to add another layer of organization on top of the interface. Since each course is unique and provides different materials, the structure of the course should be like that of the entire hub, but flexible enough to provide unique features according to subject matter.
d) **Content security—**is a crucial element for content creators, curators, and consumers. A virtual classroom solution should help organizations and education institutions gain complete control over their content. The platform should also provide built-in security measures, such as authentication and access controls, which help prevent unauthorized access, usage, and download of educational and sensitive data.

## Case study 3

## Virtual Hospital

A virtual hospital is a full-scale hospital that has no physical location, meaning a patient cannot submit analyses or have surgery performed in such a facility. On the other hand, such a hospital can offer a range of online consultations, helping patients to avoid both traveling to a location and waiting in line.

**Types:** -

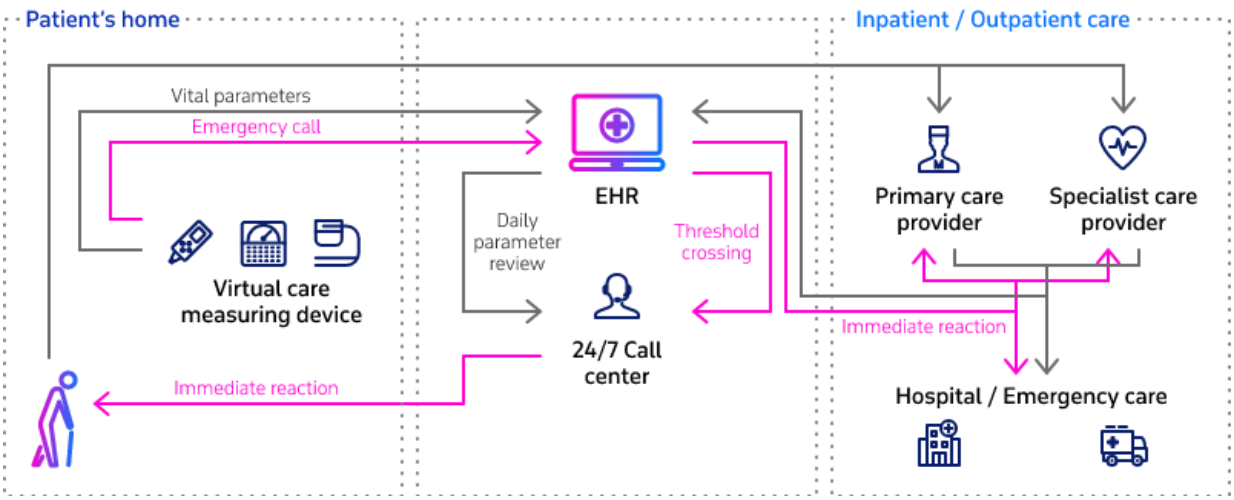
**i)** **A General Hospital: -** This type of facility works as a full-scale remote hospital providing their patients with the opportunity to book an e-visit with a specialist doctor without the need to wait for the appointment. In the US, this wait time is

one of the major pain points accountable for patients' health deterioration. According to the OECD report on health policies in the selected countries, 28% of US patients wait for their appointment for over a month.

ii) **Chronic Condition Management Hospital: -** There are virtual hospitals dedicated to managing chronic diseases. There are several virtual hospitals dedicated to remote management of diabetes, cancer, chronic lung and kidney disease, and other conditions.

iii) **Tele Paramedicine Hospital: -** Such hospitals have a team of doctors operating in a call-center environment. The team takes incoming telecalls and consults clinicians and paramedics in the field, helping resolve complex clinical issues. Tele paramedicine proves to be a lifeline for small or rural hospitals that have a shortage of specialist doctors on-premises. The external team can supervise the hospital staff and guide them through medical procedures in case of an emergency or when a patient is in a life-threatening state. Besides, medical specialists working at such virtual hospitals can assess a patient's condition on the go and offer an adequate treatment plan without delays.

**Virtual hospital architecture**




When a virtual hospital can also provide emergency care, a remote patient monitoring solution on the patient's side should be implemented to notify the call center and the hospital about a potentially dangerous situation. On the provider's side, it would also be reasonable to integrate the virtual hospital with clinical decision support tools to facilitate diagnosing and improve the patient experience. Besides, proper care delivery also calls for integrating with data analytics solutions. These tools enable doctors to track a patient's health status over time and make well-grounded treatment decisions.