

Theme 1- How is ICT best used to improve products and services in businesses?

1. Setting the scene:

This is a short, fun exercise to introduce you to the main features of e-skills VIEW. We will give you a tour of the **four companies** that you will be studying and to the main sources of evidence. We will show you how to move about within the VIEWS.

The four companies are:

- **Dover Coastguard Station**-Monitoring the English Channel shipping lanes
- **Eli Lilly**- A research-based pharmaceutical company
- **Ford Motor company**- A vehicle manufacturing plant
- **House of Fraser**- A major high street department store

As you move about look at the **floor plan** so you can get an idea of where you are. You can find these in the **bottom right-hand corner** of the screen. You can also print these off.

Just follow the instructions and answer the quiz questions.

Exercise 1- An introduction to e-skills VIEW.

*From the **main menu** click on the link to **Challenge 1**. Now click the link to go to Dover Coastguard Station **Administration area**. These links allow you to drop into areas of the companies where you will find evidence for your later challenges. You can also get to these areas yourself by following the **floor plan** for each VIEW.*

***Point your mouse** at the stair case in front of you. Note that the mouse cursor changes to an **arrow**. This means you can click to go forwards from here.*

*Click on the stairs to go to the administration area. Find the **“Fire notice”** on the staff notice board. Click on it and then make it bigger by clicking the button at the top of the screen which says **“View images in more detail”**.*

*If you **left click and hold down** the button you can move the image up and down.*

Q1. On discovering fire what three things should a staff member do?

*Click “**Back**” twice to return to the corridor. **Left-click** and **hold down the button**. If you now move your mouse you can rotate the image and look around you. Up on the wall in the corridor are some **Wall emblems**. Have a look at them.*

Q2. What type of animal can be found on two of the emblems?

*Click “**Back**” and rotate until you are facing the entrance to the administration corridor. Move into the corridor. Look at the **photos** on the wall.*

Q3. What is the name of the lightship?

*Return to the corridor. Find the main office and enter. Find Spike. Click on him for an **interview**. You can ask him questions by clicking on the **blue question links** on the left.*

Q4. Does the Coastguard service make a profit?

Q5. Where can you find a copy of the services’ annual report?

*Go back to the office. Find **Mikes computer** and click on it.*

Q6. Apart from e-mail, which program has Mike been using today?

Return to the office, find the exit and move back into the corridor. Find your way back downstairs to the reception and enter the Operations area.

*Click on the “**Find out more**” button. You will find lots of these buttons as you move about. They have further information behind them. They contain interviews, videos and other relevant information.*

*Access the **server room**. Click on the **map** in the right-hand corner. This shows where you are on the **floor plan**. The **yellow triangle** also shows the direction you are facing. Go back to the server room. When you rotate around watch the triangle move.*

*Exit the server room and click “**Return to main menu**”. This button is really useful as it will take you back to the main menu page whenever you want.*

Click on the link to the **lab corridor** at Eli Lilly. **Move east** down the corridor. Rotate round and move into lab 7. Find the **emergency shower**.

Q7. Why is there a shower in this laboratory?

Go back to the lab and exit. **Move east** further down the corridor. Look at the floor plan to see where you are. Locate the offices and move into **office 2**.

Q8. What degree did Anne do at University?

Q9. Name two pieces of IT equipment on Anne's desk.

Go back and exit the office. Click on "**Return to main menu**". Take the link to the **Manor House**.

In front of you is a **sign**. If you point your mouse at it you will find it contains links to different offices in this building. Keep your mouse pointing at the board. If you press the **shift key** on your keyboard you can zoom in and look more closely. You can zoom out using your **CTRL key**.

Click on the **Managing Director** link to go to his offices. In the first office find a photo of Eli Lilly's headquarters.

Q10. In which city in the USA would you find Eli Lilly's headquarters?

Q11. What is the microphone in the office used for?

Click on "**Back**" to return to the lobby area of the Manor House. Click on the "**Lilly in Europe**" magazine. You can flick through the magazine by clicking "**Next**". When you get to the page titled "Demonstrating economics", zoom in to the page.

Q12. In what year did Eli Lilly start to market Insulin?

Click on "**Return to main menu**".

Click on **Ford, Building A**. Move into the building.

Q13. How big in area is building A?

Move east. Move east again. Move east one more time. Rotate right and you will see the robots. Click to play a **video** of the robots in action.

Q14. What colour are the robots?

*Rotate and **move west**. **Move west** again. Rotate and **move south**. **Move east**.
Look around this area.*

Q15. What colour are the cages in this area which protect staff from machinery?

Move ahead into building A.

Q16. What colour jacket is the staff member wearing here?

*Click on "**Return to main menu**".*

*Click on the link to the Occupational Therapy Unit. Enter the unit. Rotate and enter **Physiotherapy**. Rotate round to face the exit.*

Q17. How many fire extinguishers can you see in the reception area?

Go back to reception and exit the Occupational Therapy Centre.

Q18. What colour is the truck entering gate 3?

Q19. What is the speed limit for vehicles in this area?

*Click on "**Return to main menu**".*

*Click on **House of Fraser, shop floor**. Rotate round and move to **the west end of the sales floor**.*

Q20. What is the name of House of Fraser's premium clothing "own brand"?

*Go back to the **lifts** and take the lift to the **fifth floor**. Rotate round and enter the House of Fraser offices. Look at the **staff notice board** and click on the **Payslips info** sheet.*

Q21. What is the payday for Januarys pay?

Move upstairs to the office. After the double doors there is a small reception area.

Q22. In the reception area, what magazine is sitting on the table?

Move further into the offices.

Q23. What is the name of the House of Fraser Replenishment Manager?

*Click on the “**Find out more button**” and meet Gavin.*

Q24. What is Gavin’s role at House of Fraser?

Q25. How many staff report directly to Gavin?

*Click on “**Return to main menu**” to go back and exit e-skills VIEW.*

2. Gathering evidence for your challenge:

Now you will need to look at the effects of advances in ICT on the businesses in VIEW. Look for the positive and negative effects of ICT on businesses.

Take the links in the index and remember to look for evidence in all the resources.

Note down any information you can find. You are advised to mark on your floor maps where you find information so that you can return to it later.

Dover Coastguard station

Go to Dover Coastguard station. Enter the administration area. Check out all the offices on this floor. Make sure you talk to the staff and keep your eyes peeled for information

- 1. List the different types of computer hardware and software can you find in the offices?**
- 2. What types of communication are used by the staff at the coastguard station? What types of communication do you think were used in the past?**
- 3. How has ICT changed the way people work in the administration area?**
- 4. What information in these offices could be stored on a computer in the future?**
- 5. What are the main problems that arise from using ICT in these offices?**

Go back downstairs and enter the Operations area. Try and find the engineers room in this area as well as the other operations rooms.

- 6. How are the ICT systems maintained in the coastguard station?**
- 7. How have the ICT systems changed since the 1980s and why?**
- 8. Give some examples of how computers are making tasks easier in the coastguard station?**
- 9. Why are the computers here linked together in a network?**

Eli Lilly

Now go to Eli Lilly a pharmaceutical research establishment. Go to the Manor House where Eli Lilly's main offices are found. The board in front of you has a number of departments listed on it. Check them out and interview the staff. Most can tell you something about the use of ICT at Eli Lilly.

10. How are computers used to improve communication between people at Eli Lilly?

11. How does the IT team help the scientists to do their job?

12. What are the benefits and problems with using ICT in this company?

Go to the laboratories. You can jump out and use the index to get there quickly. Investigate the laboratories along this corridor.

13. List the types of hardware and software being used in the labs.

14. How has ICT helped save time, labour and money at Eli Lilly?

15. What is computer modeling and why is important to the research team here?

Ford Motors

Now move on to Ford Motors. This is an assembly line where vans are produced. Look through the buildings for ways that ICT helps the assembly line work. Start off at building A.

16. Why are factories becoming more automated by using robots and computers?

17. What are the positive and negative effects of this on:

- **The staff**
- **The company**
- **The vans they are producing**

Go to the Occupational Therapy Centre by returning to the main index or by going around the edge of buildings A and B. An advantage of working for Ford is that they have this health centre on site.

18. How are computers used in the health centre at Ford?

House of Fraser

Now go to House of Fraser, a large department store in Oxford Street, London. First have a look around the shop floor for ways the company is using ICT, then take the lift to the fifth floor offices or use the index to get there more quickly. Look around the offices.

19. Why is the House of Fraser intranet so important to the company?

Move on to the customer services offices on this floor.

20. What is the EPOS system and how does it make House of Fraser more efficient as a retail business?

From the offices you can visit the Swindon ICT Centre. Click on the photos to find out lots of information about House of Fraser's ICT systems.

21. List what types of hardware and software are present in the Swindon Centre.

22. What are the main functions of the Swindon ICT Centre?

23. What are the problems of housing large ICT systems like this in a building?

24. How does House of Fraser deliver training using ICT? Why does it do this?

25. What are the main problems with ICT in House of Fraser?

3. Enterprise Challenge

You are setting up a new business with two fellow directors. Choose one of the following:

- A factory to make lawnmowers to sell to the European market
- A shop selling furniture imported from abroad
- A company to manage a road breakdown service for motorways

Design a PowerPoint presentation to explain to your partners how you could use ICT to help run the business more efficiently.

When preparing your Presentation you should consider these points:

- What type of ICT (hardware and software) might be needed by your business
- What might the ICT do within the business?
- What would be the benefits of using ICT in your business?
- What would be the costs/disadvantages?

Outcomes

Positive effects:

- *Speed of communication has increased so information can be processed faster*
- *Enables video conferencing*
- *Holding more information in databases can help with decision making*
- *Businesses can reach a wider audience*
- *Employees can become more productive*
- *The business can be more competitive*
- *Employees can work from home, reducing overheads*
- *Computers can do repetitive jobs*
- *It may be possible to reduce the workforce, saving on costs*
- *Computers can run robots which can do repetitive jobs efficiently*
- *Businesses can reduce staffing levels*

Negative effects:

- *ICT equipment is expensive and needs updating often*
- *Not all equipment is compatible*
- *Information may be less secure. Requires security systems*
- *People may lose their jobs*
- *Staff will have to be trained to use the equipment*
- *Requires support from network managers etc*

3.1.3 Locations in Views

Dover	Spikes admin office	Computer/printer/ DVD uses/audio
Dover	Spikes admin office	Safe- Info on DVD use
Dover	Spikes admin office	Mikes computer- Use of e-mail/PowerPoint
Dover	General admin office	Files- info on electronic storage and web site
Dover	General admin office	Cabling rack- IT infrastructure
Dover	General admin office	Interview with denise- data storage issues
Dover	General admin office	Interview with Jill- Admin IT functions
Dover	Conference room	Use of audio- visual/IT
Dover	Operations corridor	Timeline- server room- hardware and software
Dover	Operations room	Timeline- IT change
Dover	Operations room	Printers and computers
Dover	Operations room	Timeline- Sarah interview- Using IT-databases, e-mail, improving efficiency
Dover	Operations room	Click on computer- Use of software
Dover	Emergency room	IT training facilities/ communications
Dover	Operations/engineers workshop	use of hardware

In ICT terms Dover offers some interesting points because it uses ICT in a wider range of applications than the other three employers put together.

It is worth bringing out the use of ICT at Dover as a means of bringing together communications technologies, phones, radio, etc. this was so important in terms of their 'business' requirement.

Also the way that 'analogue' data from the radar is combined with other data to make a digital game like screen. This has masses of benefits for the users and the decisions they need to make.

How some data gathering equipment shows analogue techniques in use – e.g. the weather station.

Lily	Front gate	Isaac interview- IT use for security
Lily	Managing directors office	Computer- Video conferencing Linking machinery to IT hardware and software
Lily	Lab 1	

It may be worth highlighting the fundamental difference between the 'attached computer' monitoring data and then controlling equipment. They can see applications that need one or the other and increasingly both.

Lily	Lab 4	Timeline- Sandra interview- Computer modeling
Lily	Lab 4	Michael interview- Use of IT for modeling
Lily	Lab 4	Computer modeling- Click on computer screen
Lily	Lab 9	Using spreadsheets
Lily	Lab 12	using computers for display
Lily	Lab 5	Tecan robot run by computer
Lily	Lab 14	Computer use in labs- e.g. e-mail
Lily	Lab 7	reactor- Use of IT in the lab
Lily	Manor house	Click on board- conference centre- Find out about audio-visual facilities
Lily	Manor house	Click on IT on board- Andy and Bert interviews- Use of IT at Lily
Gatwick	South terminal arrivals	Theatre ticket machine- Use of online purchasing
Ford	Health centre	IT databases

Ford	Building A	Use of computers to simplify work
Ford	Buildings A-C	Use of robots
Ford	Building B	Computer to control fork lift usage
Gatwick	Rotary next to lifts- Service air office	Use of IT
HOF	Rotary by lifts	Use of IT in sales
HOF	3rd floor- Rotary by lifts	Timeline- Maureen interview- Use of databases
HOF	5th floor- Offices	Click on monitor- Screen shots of Intranet
HOF	Customer service- inner office	Timeline-Click on monitor- Info on use of EPOS system
HOF	Swindon IT centre	Hardware
HOF	Swindon IT centre	IT to support help line
HOF	Swindon IT centre	Rob interview- Use of IT