

# Open access publishing and innovation

Dagmara Weckowska



The Open University



# The purpose of this session

- Understand why open access publishing links to innovation
- Identify assumptions that underlie the claim that open access publishing will stimulate innovation
  - ➔ Develop research agenda
- Identify how to unlock the full economic and societal potential of open access publishing
  - ➔ Identify scope for policy actions



# Will open access lead to innovation?

“That’s a very optimistic view. But of course, anything that helps **sharing information** is potentially leading to more innovation. I would doubt that it’s a game-changing development. (...) It would work principally that you have a **clever person** that **previously couldn't read a journal** suddenly reads it because it’s open access and gets a great idea by seeing this whatever new fact and comes up with something that’s a brilliant next step for whatever commercial development is needed.”



# Will open access lead to innovation?

“The innovation is going to come from having an idea, **finding little bits of information, putting them together**. Most of that could be done anyway before the whole open access agenda. If you think where most of innovation is going to happen, it’s going to be in **your leading research universities or the companies**, both of whom **would have access to all the information anyway prior to open access**. The extreme of **somebody in their garden shed** having this idea, doing some research and then developing it, may happen but it’s not going to be in the numbers compared to innovations from the university or the industry sector.”



# Will open access lead to innovation?

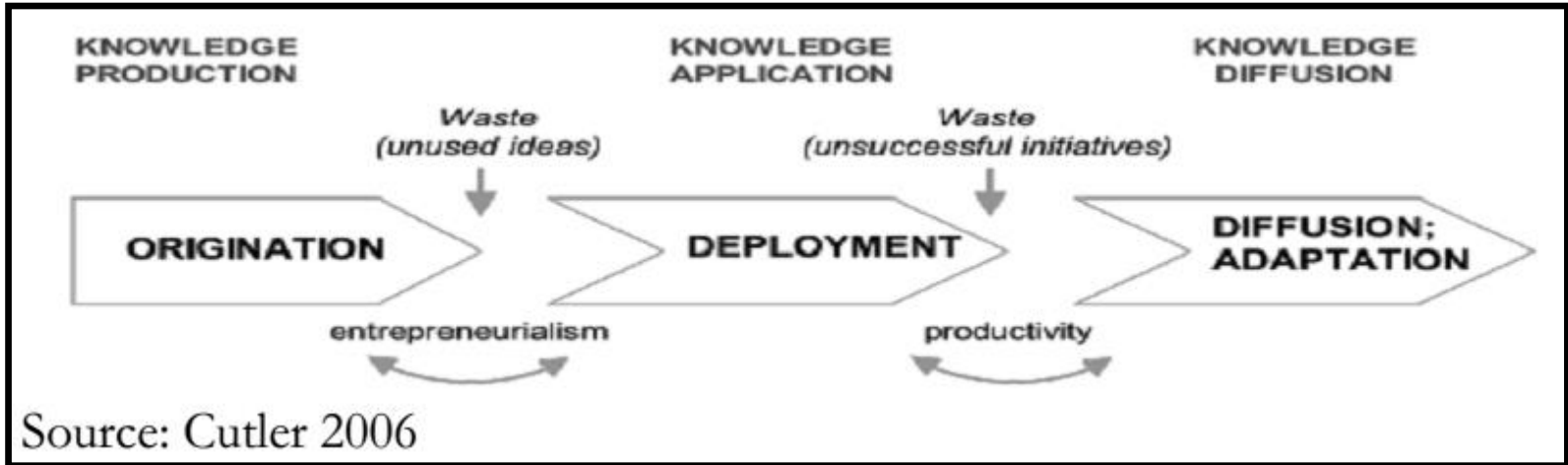
“I understand research councils are under pressure to make sure that the money is spent well and it benefits, but some big companies are benefitting, despite not being in the UK. So what is the payback? The payback is maybe that they want to go and **fund research in the UK**, or they want to go and build their large facility, but that’s less likely these days. The people who decided this maybe don’t think enough about what the payback is, but maybe that’s not a good question to ask right now.”

# Question 1

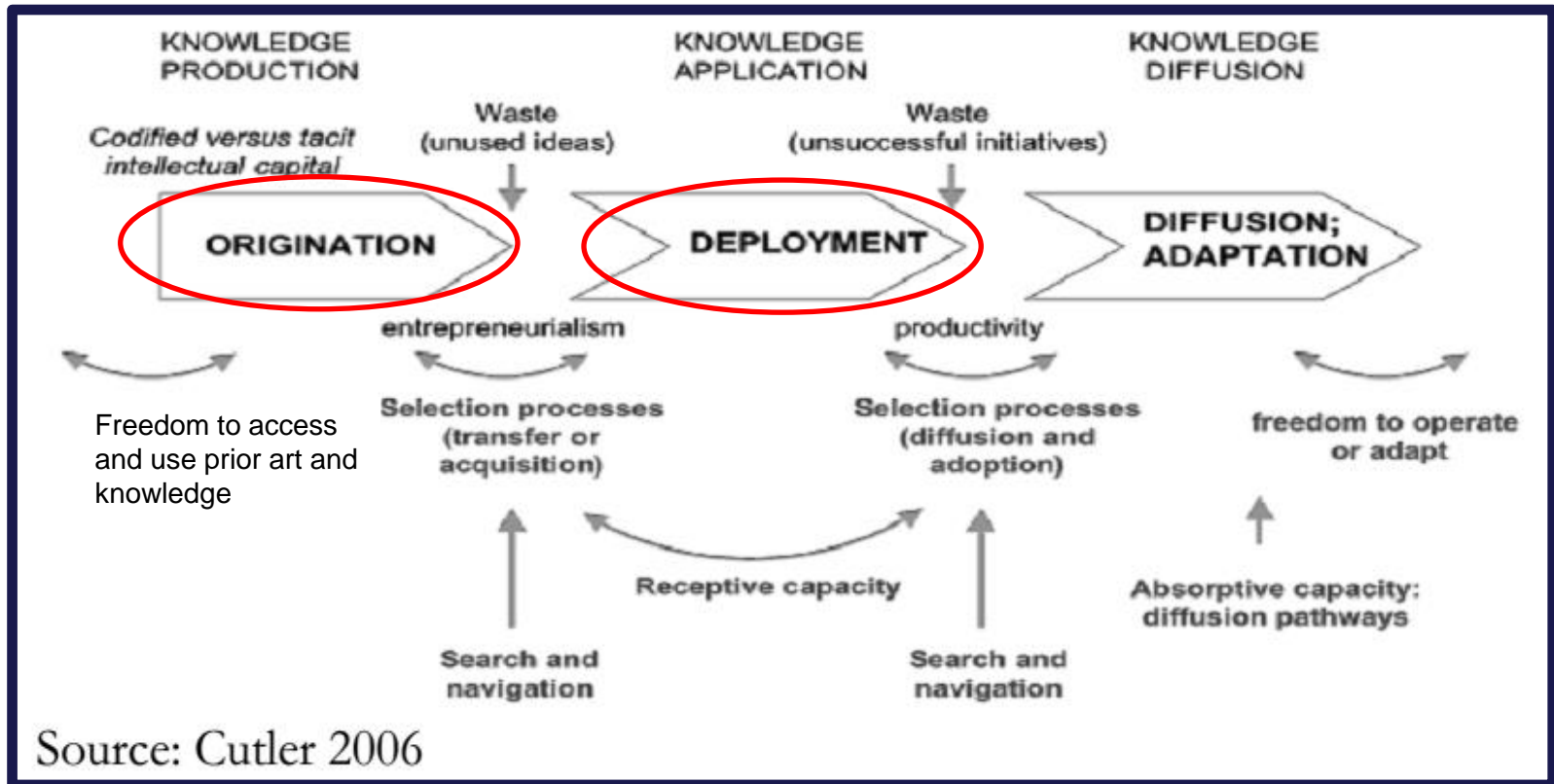


**Why is OA publishing linked to innovation?**

# Innovation process

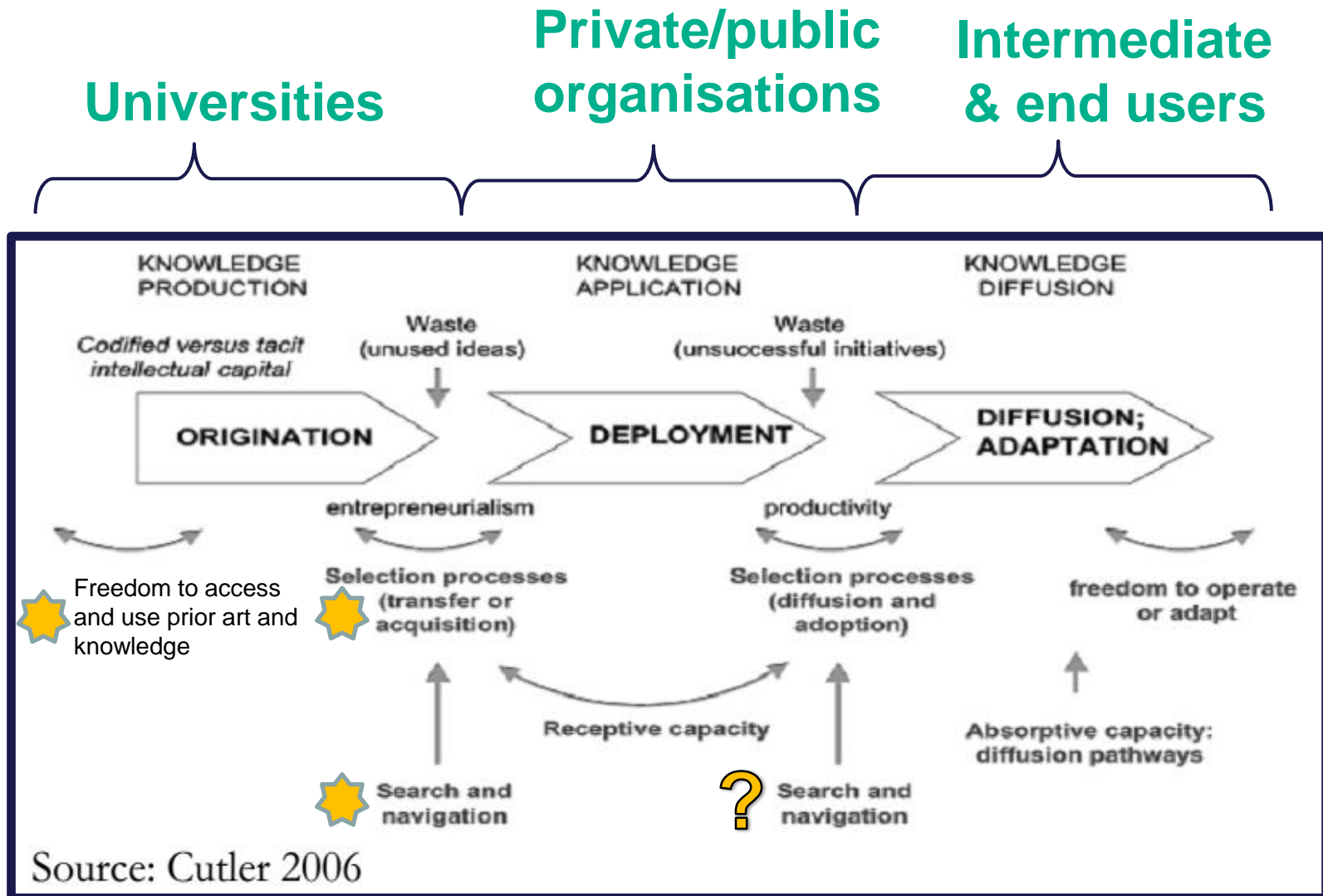


# Innovation process and the role of knowledge





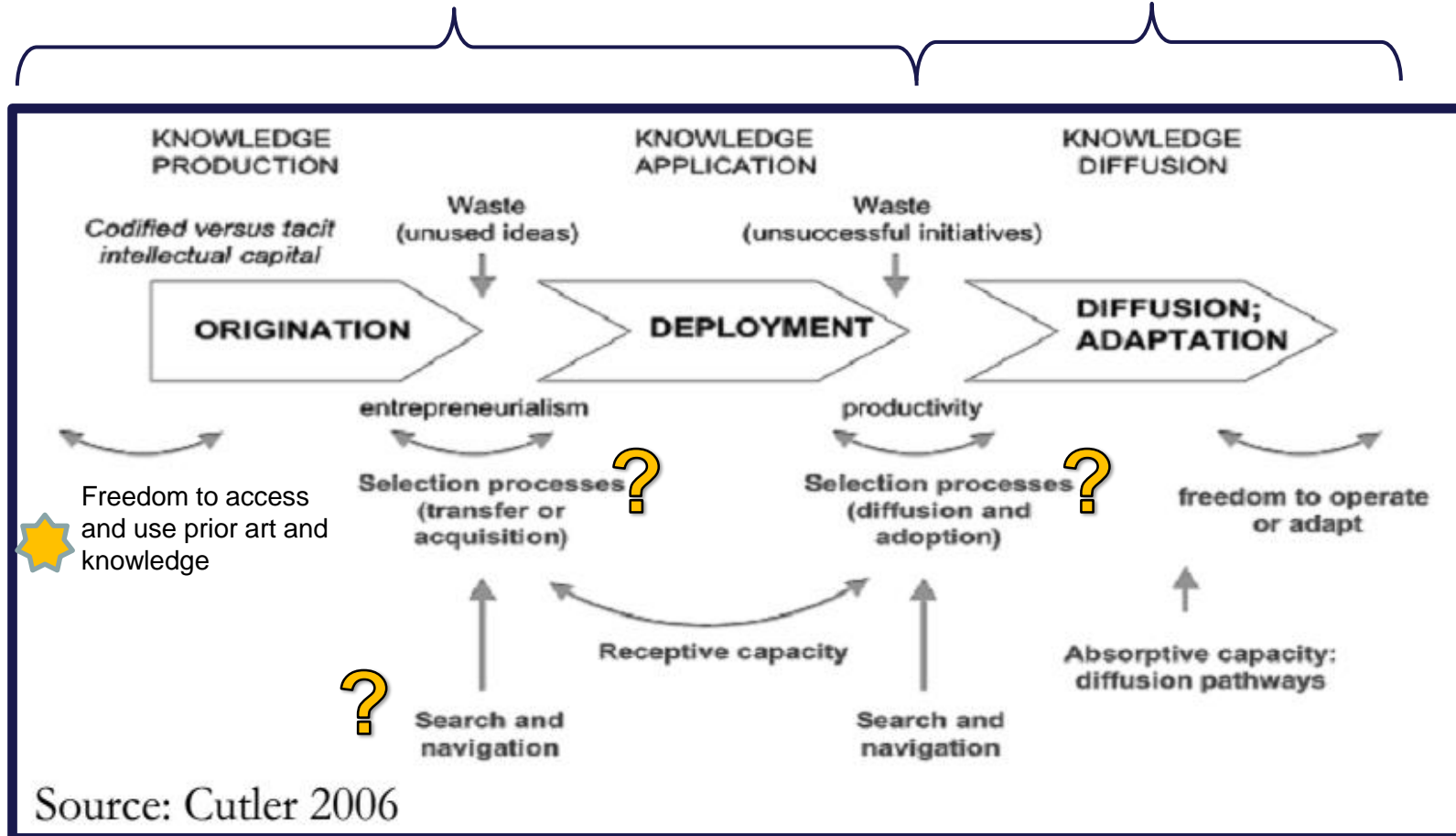
# Linear innovation model




# Open innovation model

Multiple private/public organisations

Intermediate & end users



innogen

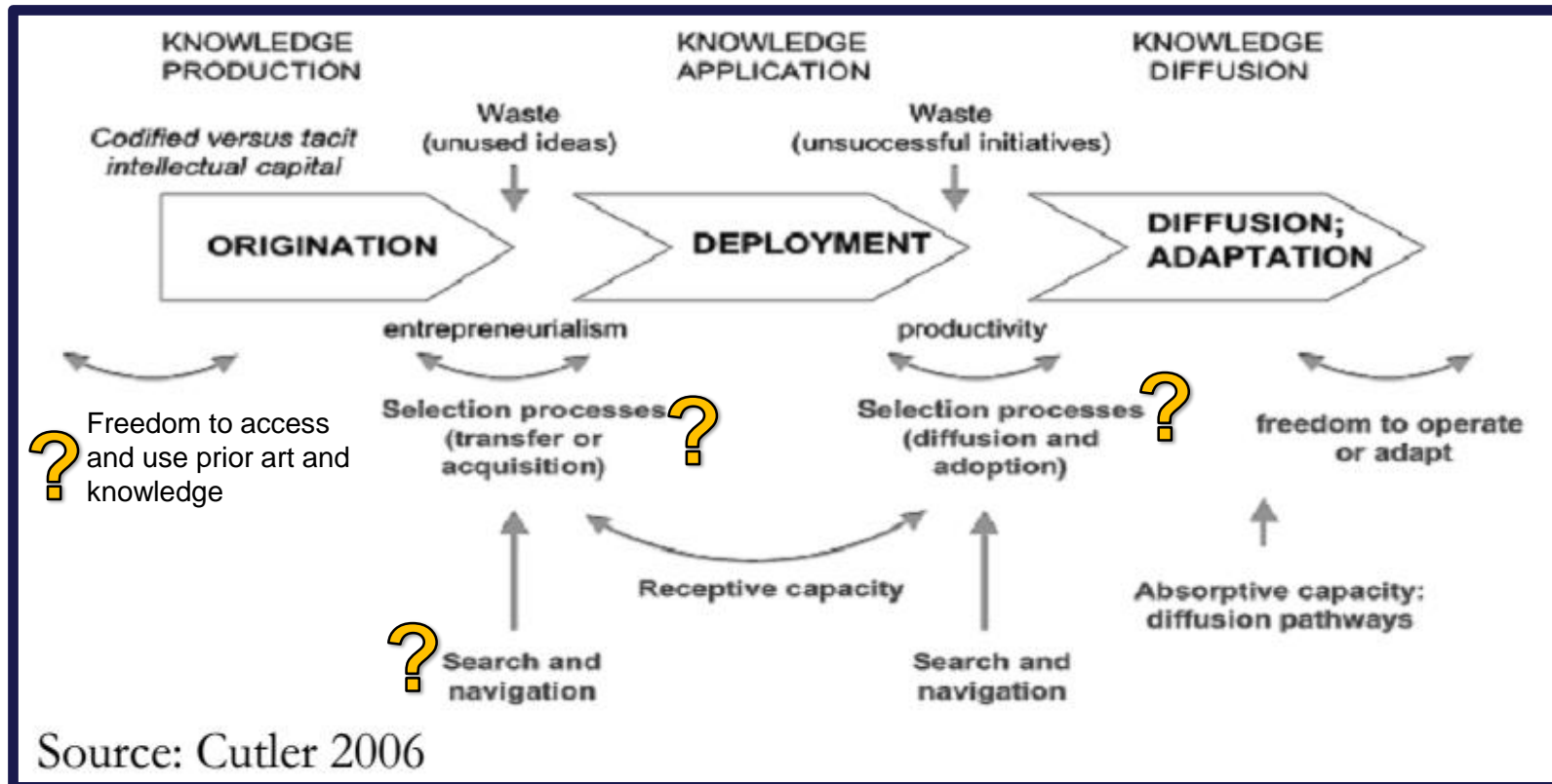
 processes that may benefit from open access to scientific knowledge

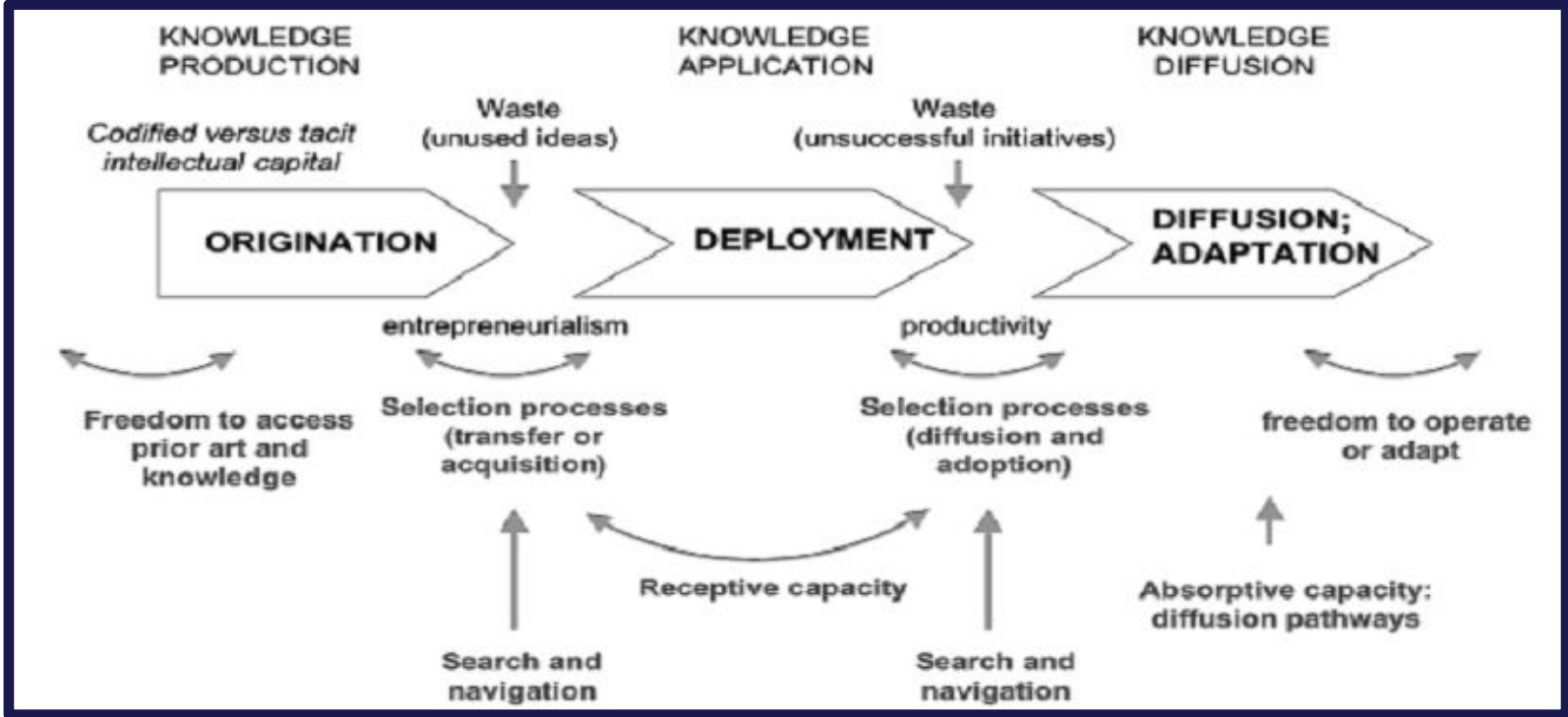
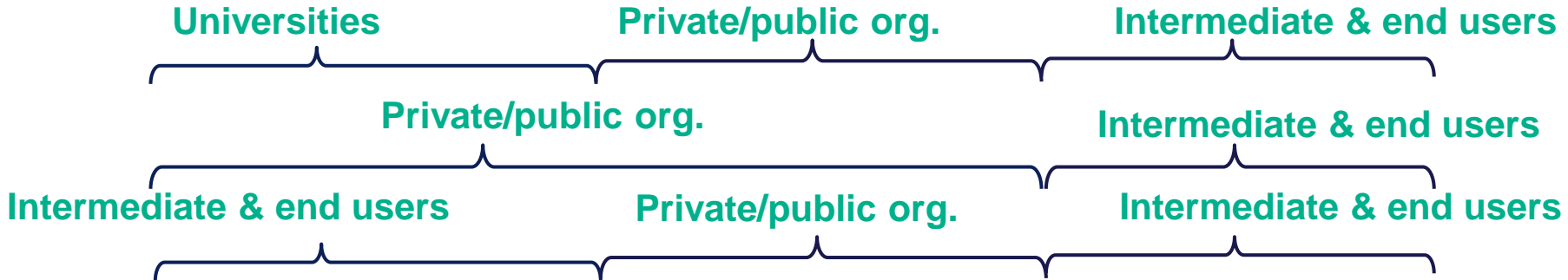
# Model of user-led innovation

Intermediate & end users

Private/public organisations

Intermediate & end users





## Question 2

**What assumptions underlie the claim that open access publishing will stimulate innovation?**

# Assumptions

- 1. Knowledge production at universities was hampered by limited access to scientific literature**
2. Knowledge produced at universities was not applied in practice because public/private organisations had limited access to scientific literature
3. Scientific literature includes commercially applicable knowledge
4. Users (individuals, public/private organisations) are in a position to absorb ideas from scientific literature



# Re: Assumption 1

“The people that do the innovation are all people who could have seen **the information** anyway because they are all **scientists in universities**. (...) Yes, okay, on a worldwide global basis, maybe that will be true because then scientists who would have been **limited by the amount of information they could have seen**, now see it all and then can put two and two together and innovate. That is a spurious argument if the research councils are saying to government, “It’s going to lead to more innovation in the UK because...” because all the people that could have seen it then can see it now. Who are the new people that can see it?”



# Assumptions

1. Knowledge production at universities was hampered by limited access to scientific literature
- 2. Knowledge produced at universities was not applied in practice because public/private organisations had limited access to scientific literature**
3. Scientific literature includes commercially applicable knowledge
4. Users (individuals, public/private organisations) are in a position to absorb ideas from scientific literature





## Re: Assumption 2

“Giving everyone free access to publications, it’s a nice thing, but I don’t know if it’s really going to have a big difference on how **science advances**, to be honest. (...) I don’t know if access to publications is really the limiting factor to progress, especially in the UK, for the UK to benefit from knowledge. (...) I think **most universities in the UK** have access to everything they need. **Companies** have access to what they need.”



# Assumptions

1. Knowledge production at universities was hampered by limited access to scientific literature
2. Knowledge produced at universities was not applied in practice because public/private organisations had limited access to scientific literature
3. **Scientific literature includes commercially applicable knowledge**
4. Users (individuals, public/private organisations) are in a position to absorb ideas from scientific literature



# Re: Assumption 3



In collaborative projects, a commercial partner decides what information is disclosed in a publication

Commercial partner does not want to reveal more about the invention than required for patenting

In projects fully funded by industry commercial partner decides whether to publish or not

Under certain conditions university-industry collaborations prevent disclosure of knowledge in publications

Under certain circumstances patenting prevents disclosure of knowledge in publications

The weakness of a patent prevents one from publishing

**Withholding knowledge**

Research methodology is too complex to be fully disclosed in a paper

Publishing norms prevent disclosure of certain knowledge

Publishing negative results is very difficult



# Assumptions

1. Knowledge production at universities was hampered by limited access to scientific literature
2. Knowledge produced at universities was not applied in practice because public/private organisations had limited access to scientific literature
3. Scientific literature includes commercially applicable knowledge
4. **Users (individuals, public/private organisations) are in a position to absorb ideas from scientific literature**

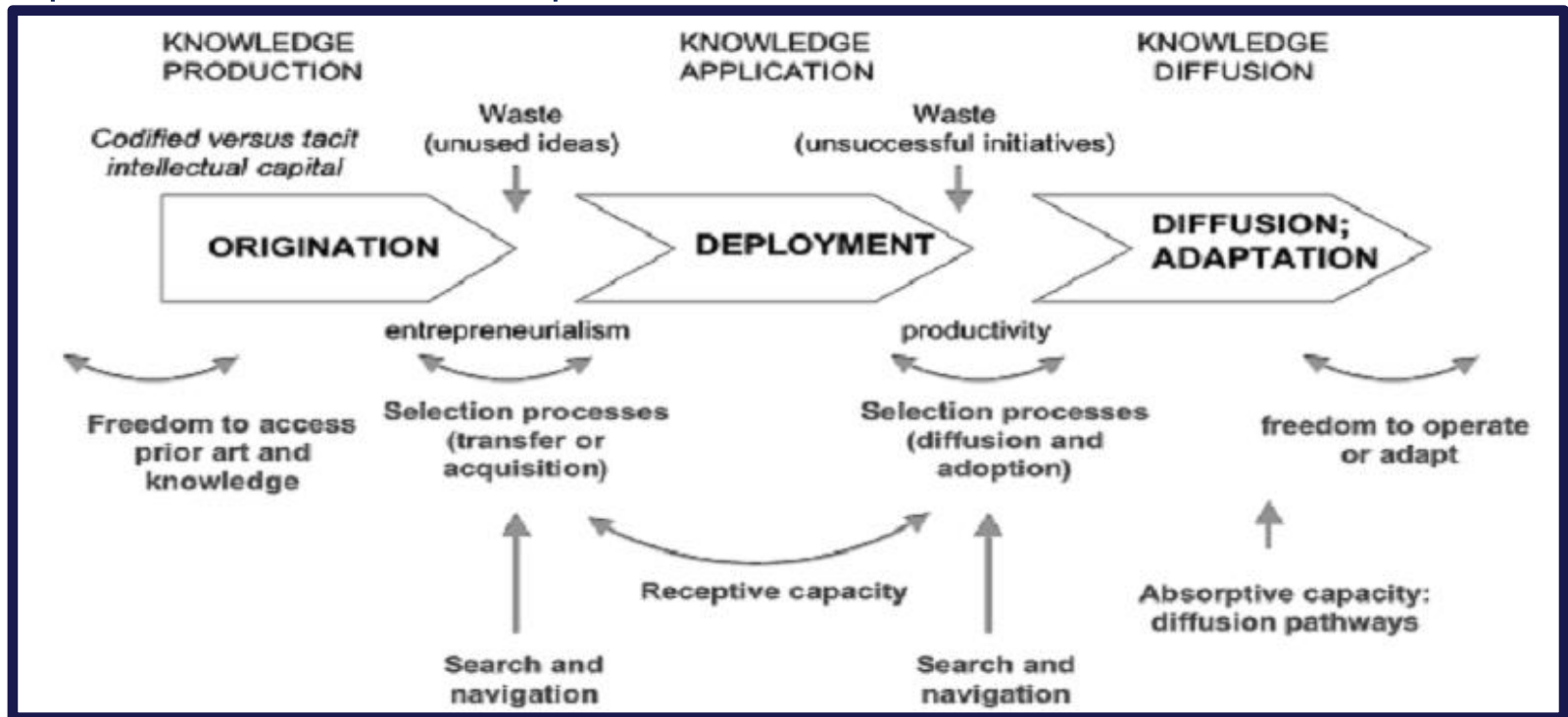
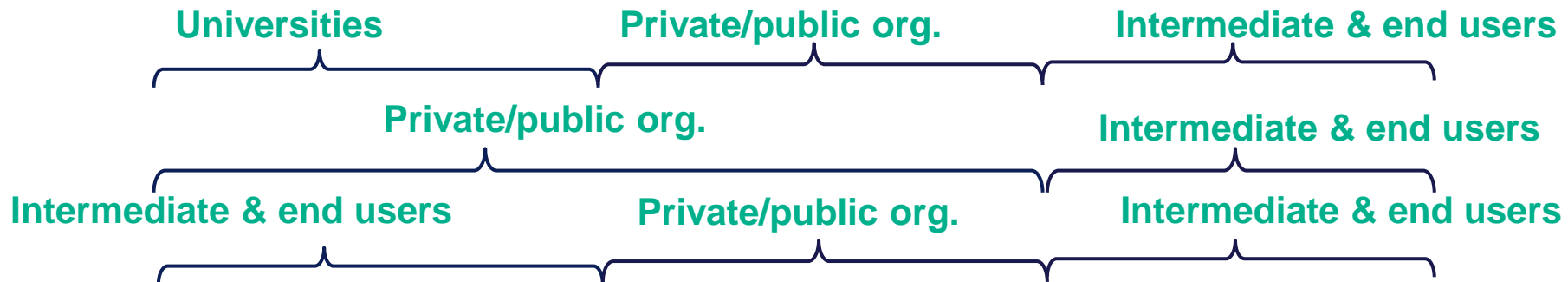


## Re: Assumption 4

“I think quite a lot of the people **in scientific technology companies** start off as scientists, and they employ scientists. They make judgements on what information they need for a commercialisation or whatever they need for their business, but in terms of the science, they probably would appreciate the information in the same way that other scientists would get it because they are **trained scientists**.”



# Other assumptions?



# Question 3

**What could be done to realise the full economic and societal potential of open access publishing?**

# Thanks to our funder – ESRC and all interviewees



The Open University



THE UNIVERSITY  
of EDINBURGH

