



**Cambridge  
Assessment**



# **Global Listening**

## **User experiences**



Design studio session

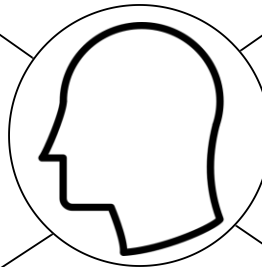
# Empathy Map (External users)

- Exam officer get anxious.
- Logistic staff get frustrated.
- Lack of trust in the physical CD.

- CDs are poorly labelled.
- CDs takes a lot of storage space.
- CDs are getting stuck in customs.
- It take too long to check CDs.

**Think & Feel**

**See**



**Hear**

**Say & Do**

- CDs are obsolete.
- CDs are no longer used by venues.
- CDs are corrupted.
- CD players are hard to source.

- Cut short required checks.
- Rip CDs into digital format.
- Rely on customer service and DFD.

# User Persona

## Independent school X

Occupation: Exam officer

Responsibility: Managing the centre and the exams delivery.

Venue: Internal venue with own equipments.

Exam room use concurrently: 2

Staff handling CD: 3

Invigilator: 5 external.

### Level of Concerns

Security



Logistic and production



Accessibility



### High-Level Requirements

- Greater security to minimize malpractice.
- Reliability to prevent panic when audio has difficulties - need to be sure it will work
- CA control the credentials - centers apply to create credentials and we approve.

### Pain points

- Student Anxiety - Audio issues
- EO anxiety - will it work or run fully?
- Keeping a physical CD is a security risk.
- One person gets encryption code

# User Persona

---

## Associate Centre Y

Occupation: Exam officer

Responsibility: Logistic and delivering all material.

Venue: 300 External with their own equipments.

Exam room use concurrently: 12

Staff handling CD: 2 perm, 2 temp

Invigilator: 200 (external)

### Level of Concerns

Security



Logistic and production



Accessibility



### High-Level Requirements

- Similar system then DFD.
- Venue shouldn't have access to files before exam day for security reason.
- 1 password per session that could be use by all the staff.
- Recording should only be playable once.

### Pain points

- No time to check all CDs
- Venue (schools) have no more CD players and use USB (mp3 player) so we had to source and buy portable CD players.
- Sorting equipment and making sure venues are ready.

# User Persona

## Associate Centre Z

Occupation: Exam officer

Responsibility: Delivering all the listening exams to italian state schools' network.

Venue: External with the centre equipments.

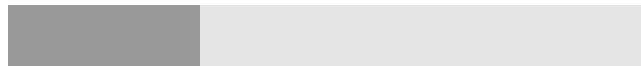
Exam room use concurrently: 6

Staff handling CD: 2

Invigilator: Vary (external)

### Level of Concerns

Security



Logistic and production



Accessibility



### High-Level Requirements

- Need to be able to transport the audio onto something e.g. USB, so they can play it in many rooms/venues, due to a lack of internet and poor equipment at venues.
- Centre should be allowed to create credentials because of the venues they have and centres should not share access with venues.

### Pain points

- Insuring correct CD transported to right venue.
- Security issues when transporting CD to venue - this is done internally by the centre
- The secure storage take lots valuable office space.
- it take Long time to check CD, 5-6mn per CD and there are many as they have venues.

# User Requirements

## Description

Need to be able to transport the audio onto something e.g. USB, so they can play it in many rooms/venues, due to a lack of internet and poor equipment at venues.

Centre should be allowed to create credentials because of the venues they have and centres should not share access with venues.

Similar system then DFD.

Venue shouldn't have access to files before exam day for security reason.

1 password per session that could be use by all the staff. - Recording should only be playable once.

We need to be able to use the solution on a tablet or download the file on USB.

Receive the PW or decryption code on exam day then we forward them to supervisors.

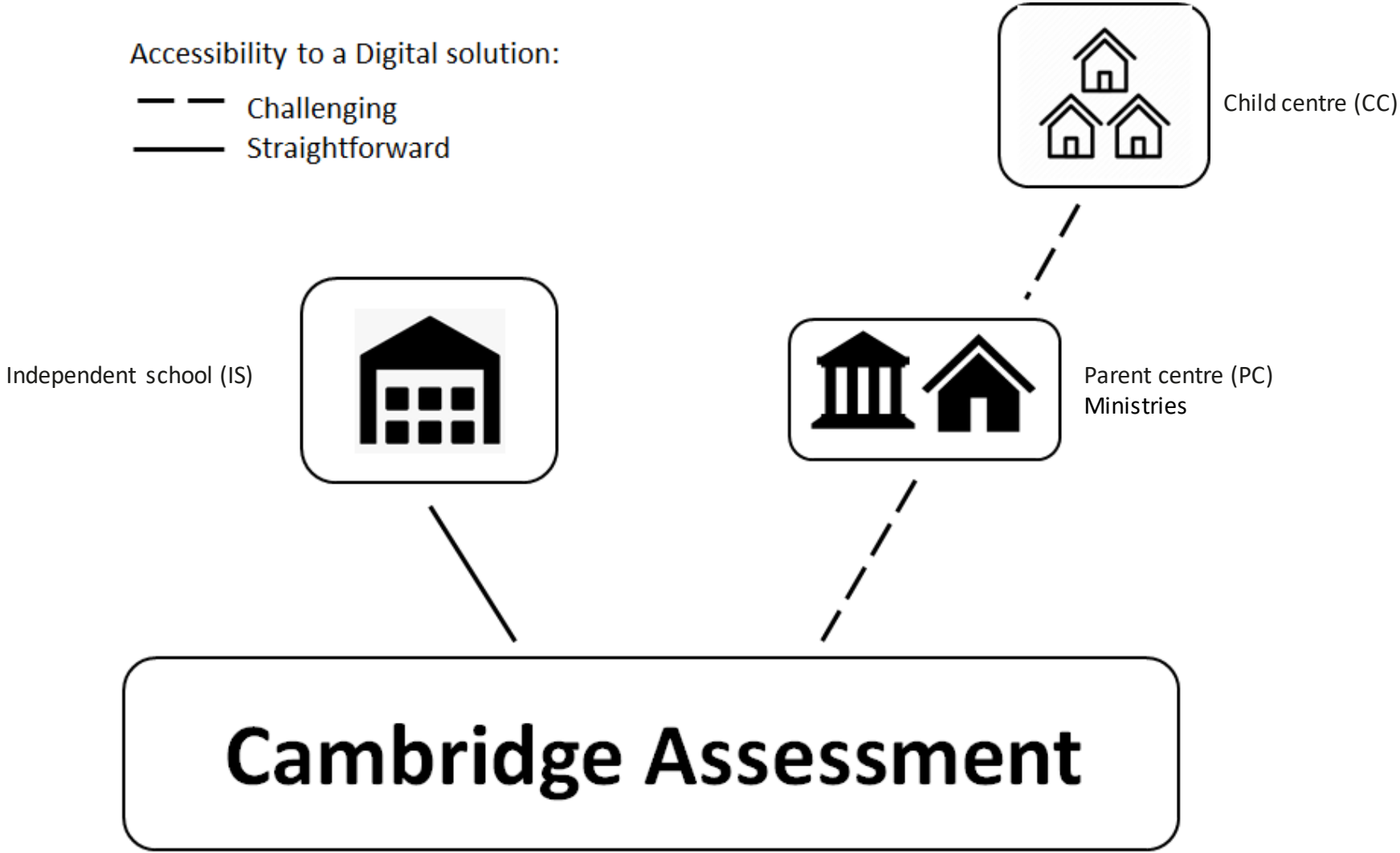
Similar to DFD

Greater security to minimize malpractice.

Reliability to prevent panic when audio has difficulties- need to be sure it will work.

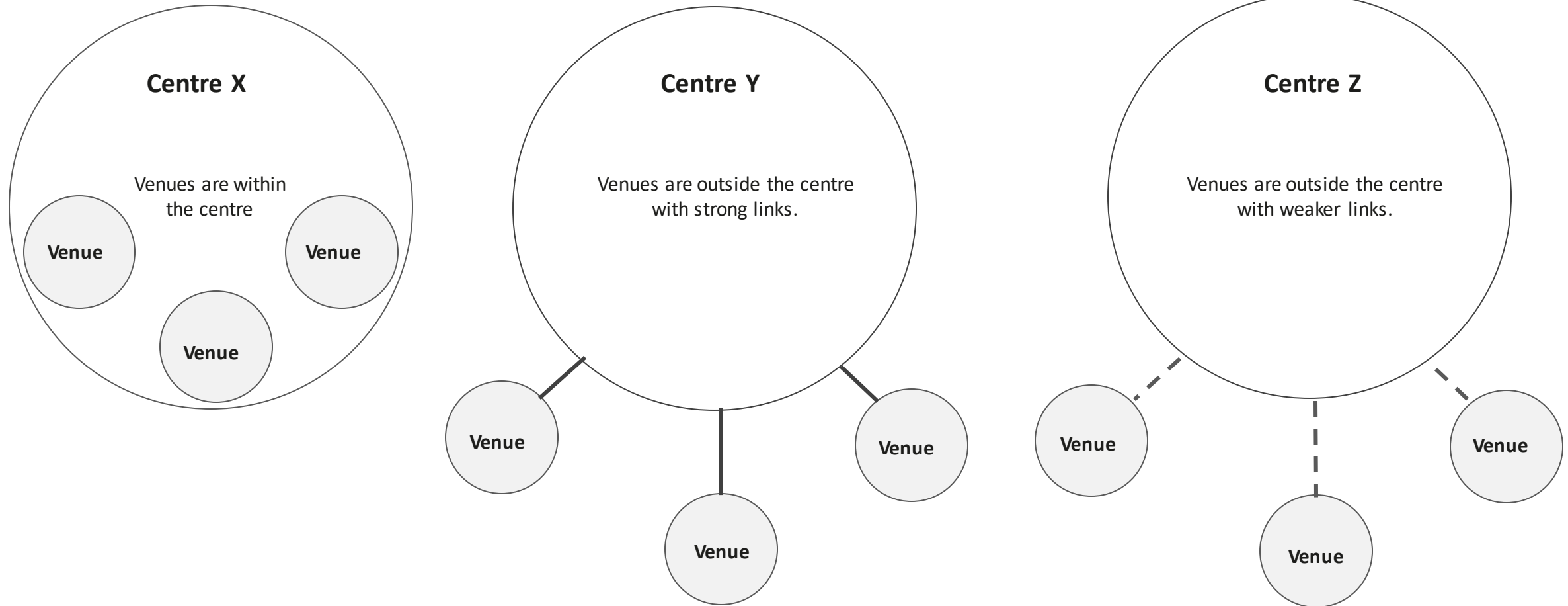
CA control the credentials - centers apply to create credentials and we approve.

# The Influence of Structure



# The Influence of Structure

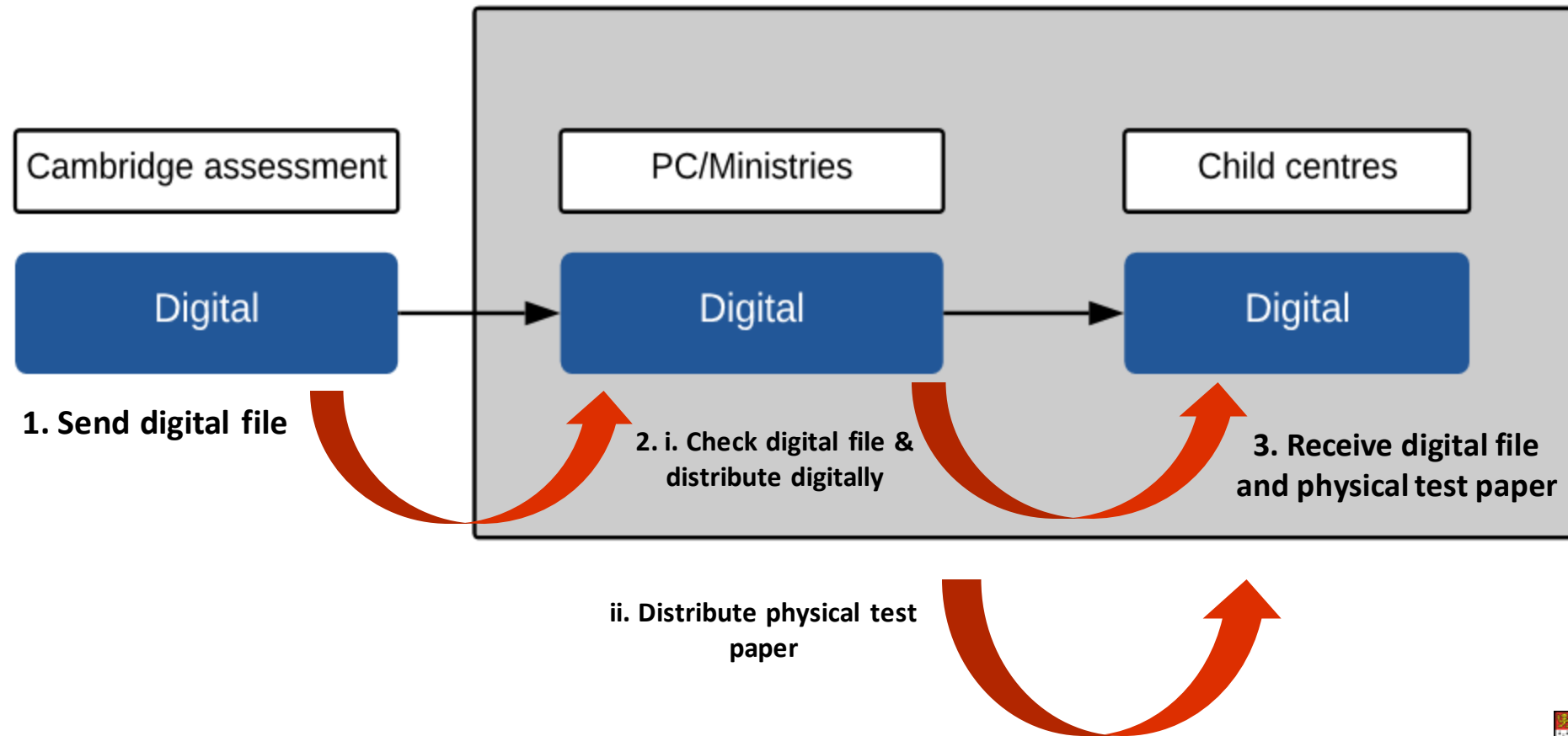
---





# Digital requirements ONLY fit Centre X

## *Ideal plan*



# Digital requirements ONLY fit Independent Schools

Centre X (IS):

Necessary  
equipment



Technologically ready

- Smaller number of exam rooms.
- Less or no investment, easy adoption process

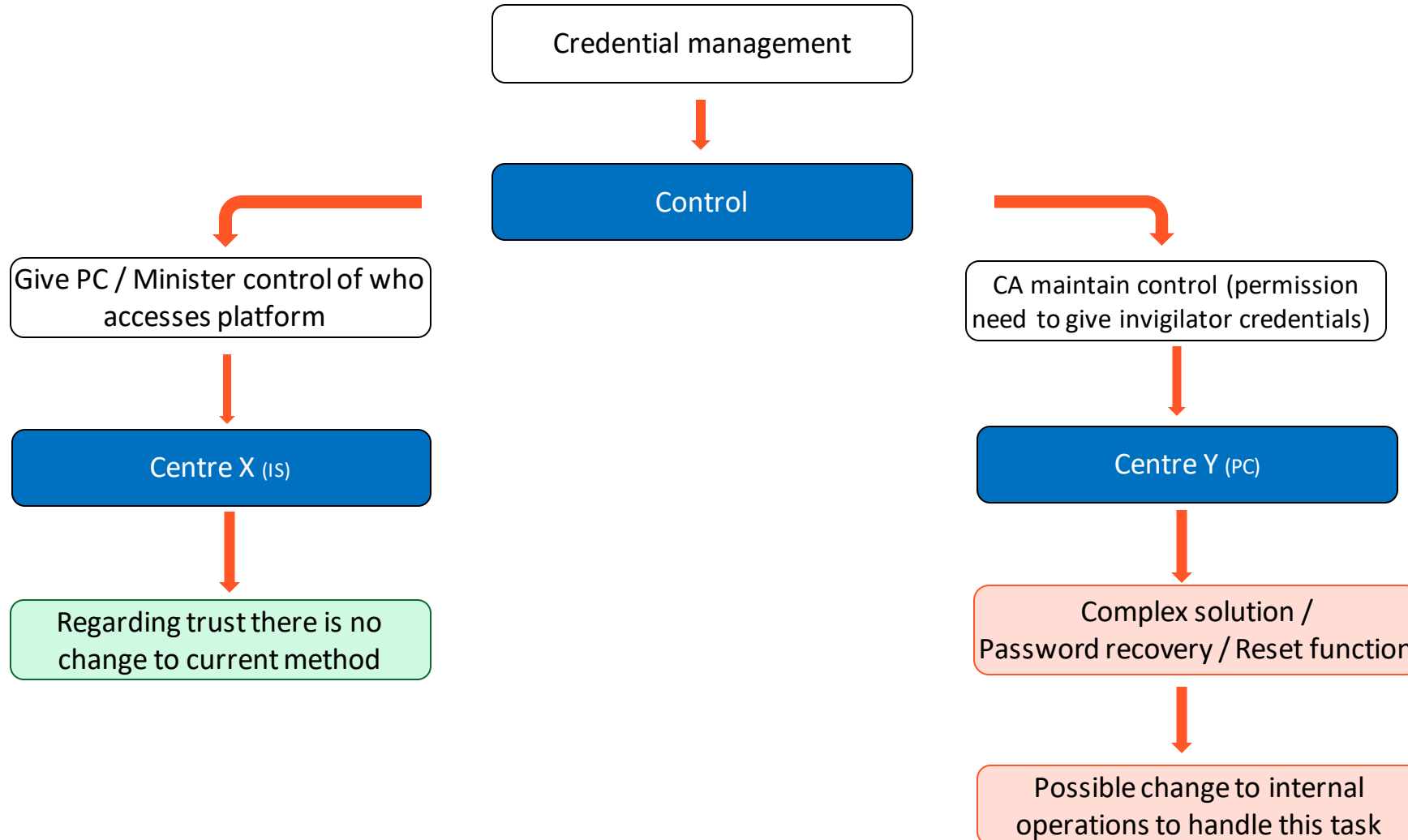
Connectivity



Connection guaranteed in Exams centres

- No limitation to accessing the platform
- Likely to have IT support.

# Parent Centres/Ministries - Issue with control



# Alternative – Minimum Viable Product (MVP)

The issues with control that Parent Centres/Ministries will face can be solved with a MVP that allows digital file transfer.

## Centre Y (PC)

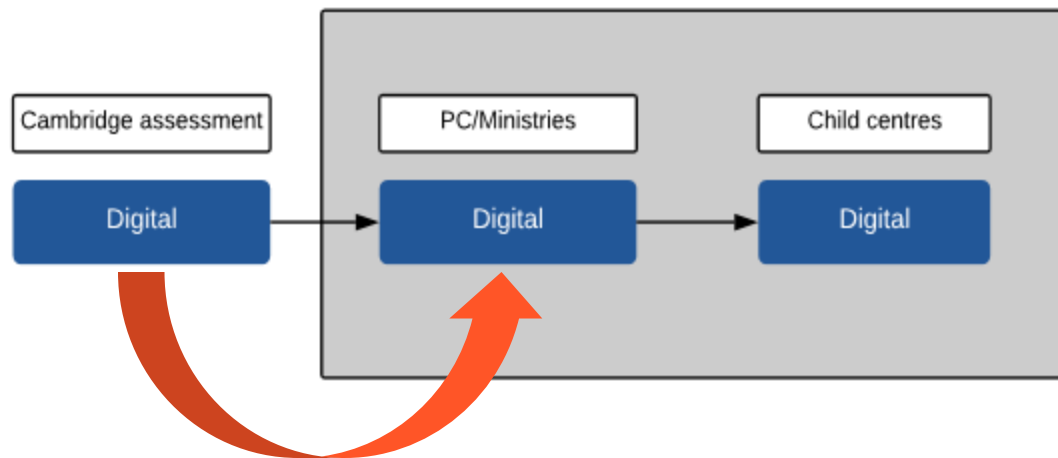
Venues used:

Business & Commercial centres

➔ No connectivity problem

Venue Equipment

➔ Authority to make requirements



CA control with windows allocation

## Centre Z (PC)

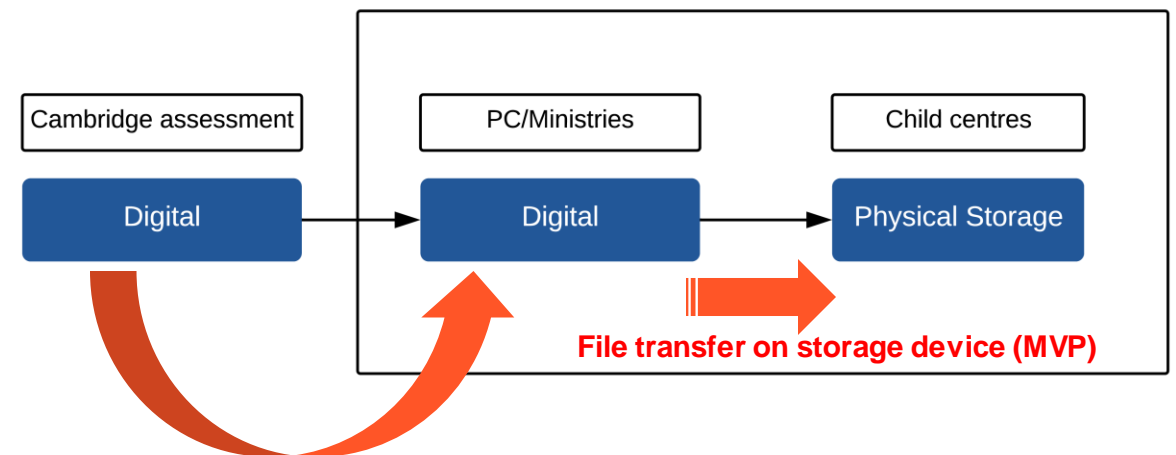
Venues used:

State schools

➔ Poor funding & no equipment

Own Equipements










➔ Financial burden



CA control with windows allocation

# Summary

---

	Readiness	Control issues	Need for MVP
Centre X (Independent school)			
Centre Y (Parent centre)			
Centre Z (Parent centre)			

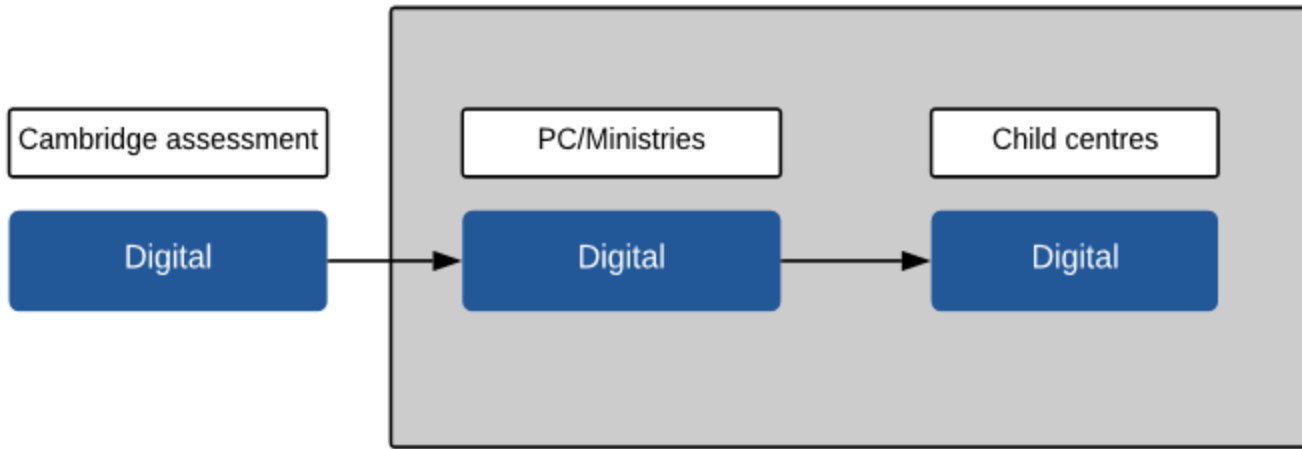


**Cambridge  
Assessment**

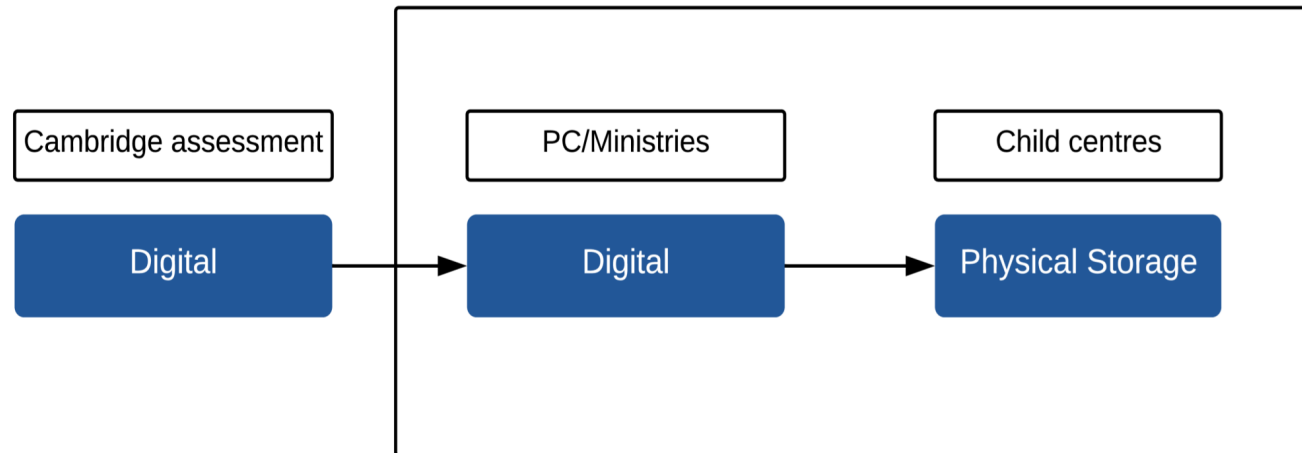


**Global Listening**  
**UX Research**

*Digital solution (Security)*

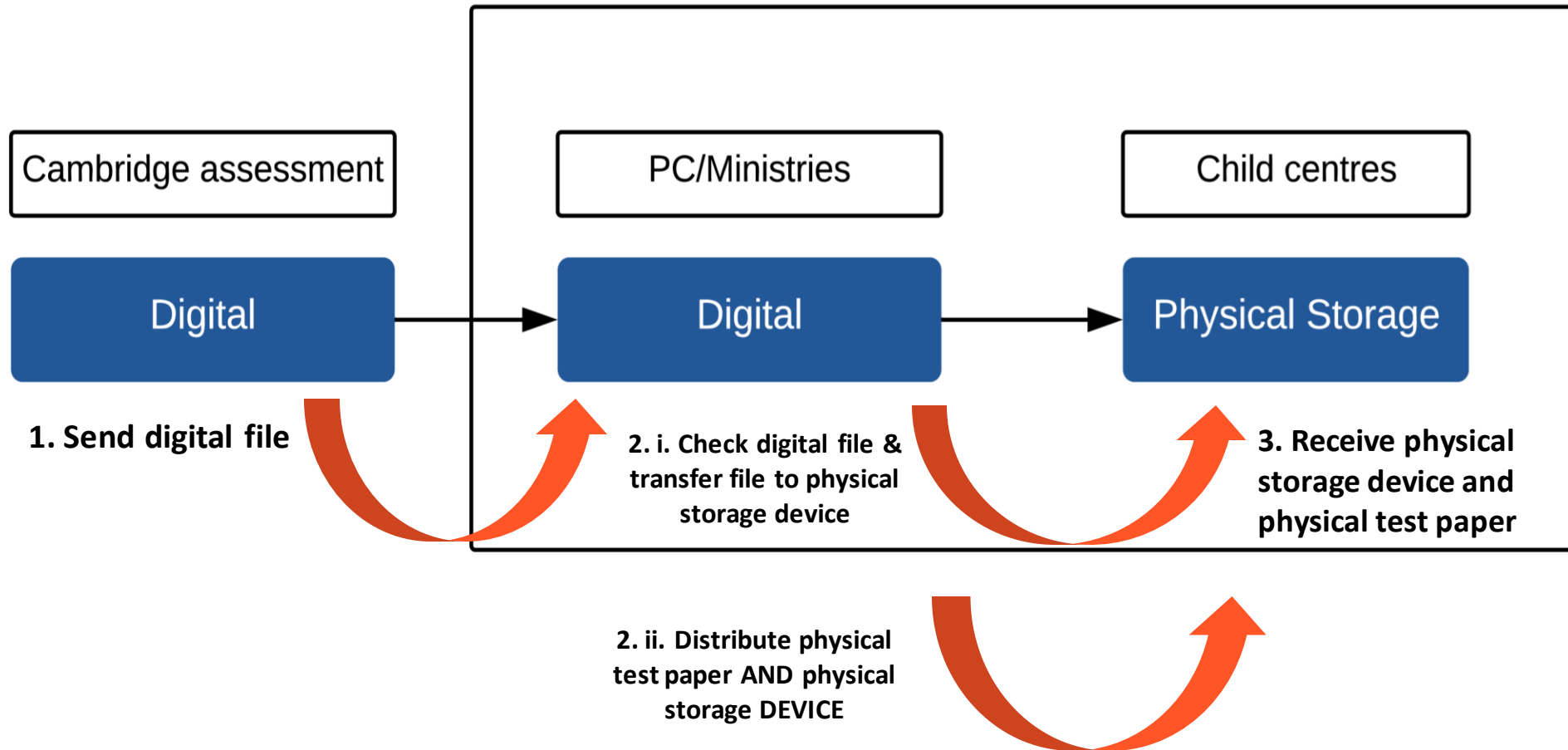


*Ideal plan*



*Contingency plan (MVP)*

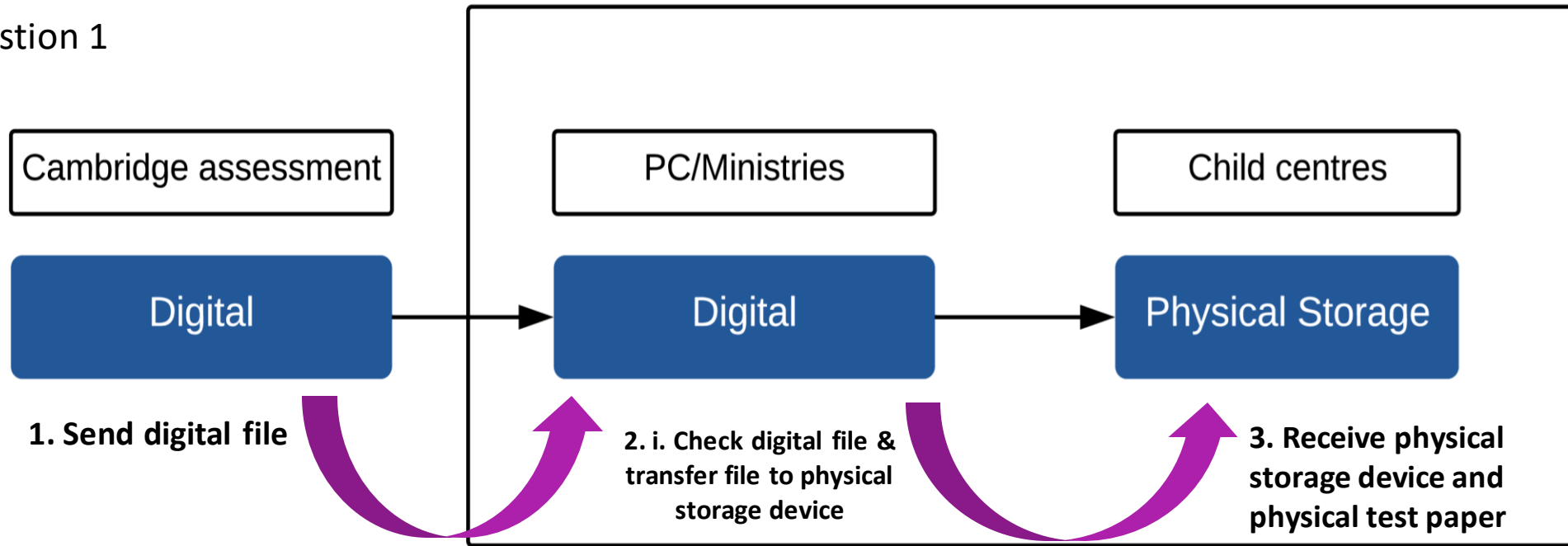
# Contingency plan



*What security measure will you apply on the physical USB that will hold the audio file? Consider the transfer process and the dispatch process.*



Suggestion 1



Create **OWN** encryption code

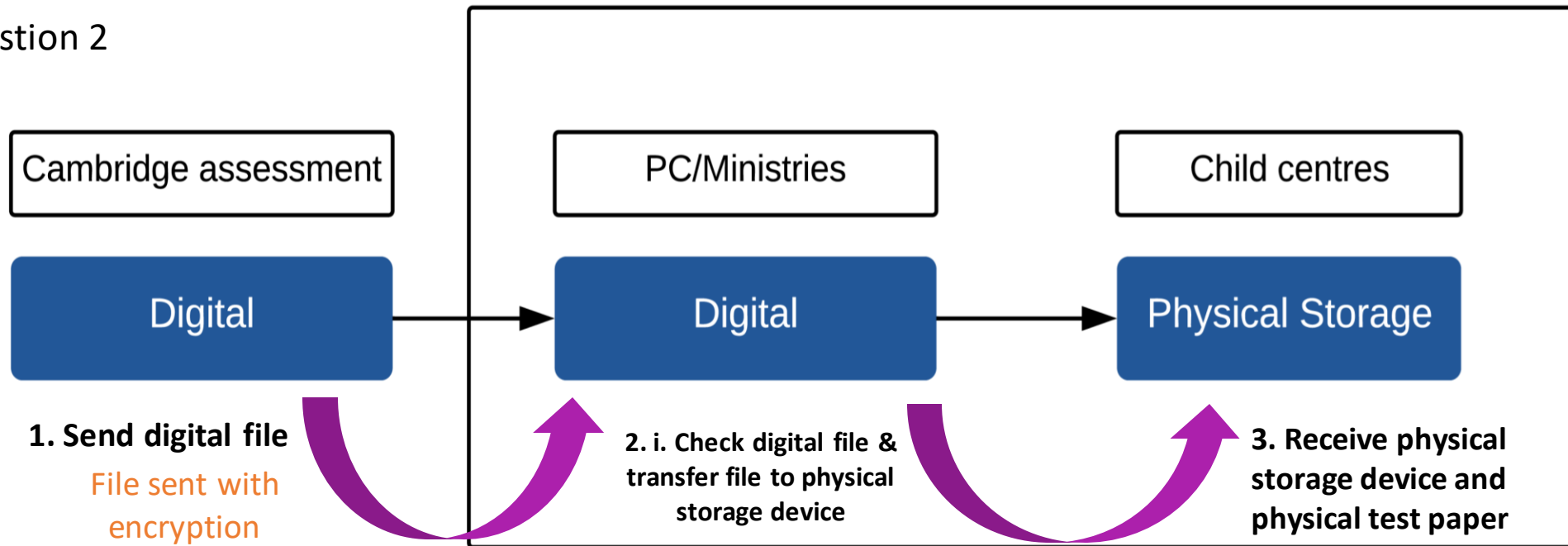
2. ii. Distribute physical test paper AND physical storage DEVICE

SEND Encryption code (via mobile)

Open with Encryption code given

*Will you be comfortable with the task of encrypting the audio file for your venue, to control their accessibility window?*

## Suggestion 2



- **SPECIFIC CODE PER CENTRE**

Check file with Encryption code given

Open with Encryption code given

2. ii. Distribute physical test paper AND physical storage DEVICE

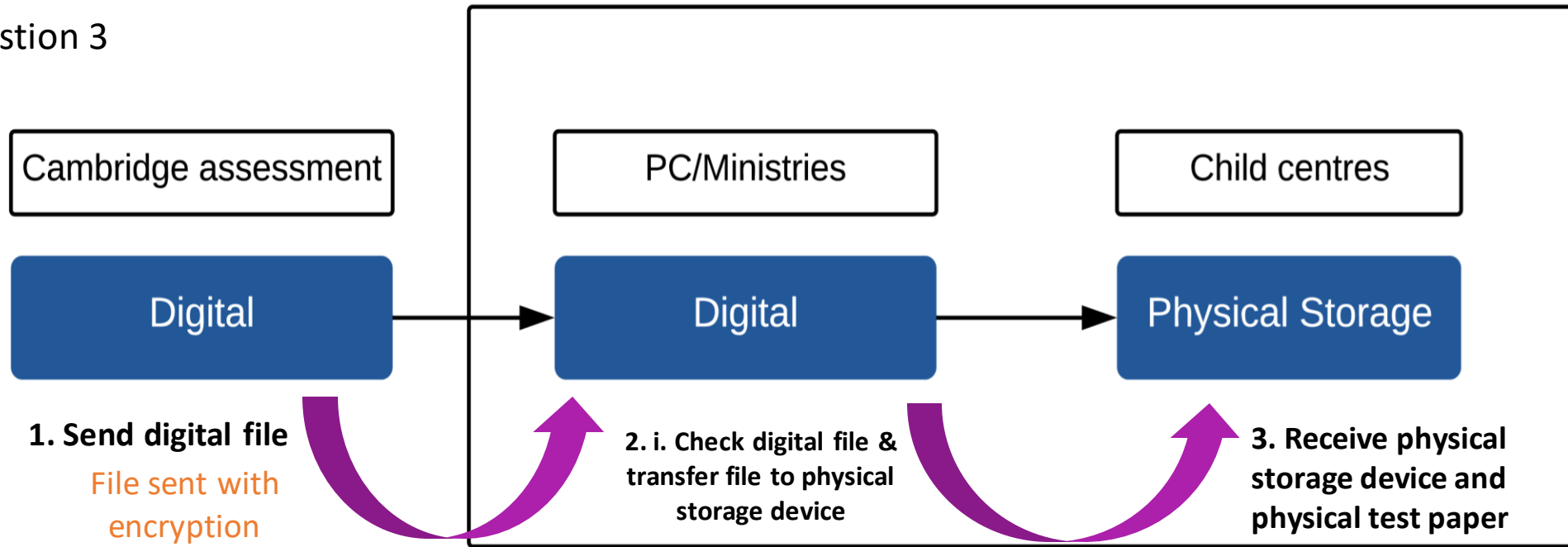
SEND Encryption code (via mobile)

*Do you communicate with your exam venues on the exam day?*

*What means to you use to communicate? If mobile, text or groupchat?*

*If not, is it possible for you to communicate with your child centres? Something to take on for an overall easier solution?*

Suggestion 3



- **ONE CODE PER EXAM SESSION**

Check file with Encryption code given

Open file with Encryption code given

2. ii. Distribute physical test paper AND physical storage DEVICE

SEND Encryption code (via mobile)

*How comfortable are you with the idea of all centres having the same encryption code for the audio file?*

*User feedback*

	Audio format within the process (CA - PC - CC)	Security suggestions	Security measures willing to be taken by centre	Concerns/opinions	Suggestions/Comments
	Digital - Digital - Digital (ideal solution)	Digital file from end to end	Seal it in zip sealed envelop - to know if package has been opened		CA send file encrypted then centres decide: 1) To send file to child venue decrypted 2) Pass the code that was given to them to decrypt form CA - code per session.
			Signed delivery if using a courier		Code to decrypt can be put in the paperwork that gets sent to the supervisor. They can have this code even before, no need for messaging on exam day.
Italy	Digital - Physical file transfer file - Receive file on device (contingency plan, MVP)	The centres create their own encryption code on the open file they receive from CA. They communicate this code via message to the centres. All of their child centres use this code (Suggestion 1)		Asking staff to do more whilst the price for CA service increase - not comfortable	File be put into an MP3 player instead of USB - still cheaper than laptop and doesn't need internet connectivity.
				No problem communicating on the exam day - via groupchat	Encrypted file still requires a software and therefore laptop - Instead can also use USB that has a code lock on the device itself - that code for the lock can be communicated instead. This means the audio file is not encrypted but the physical device itself is.
		Encryption code given by CA for that specific centre - all child centres under that parent centre uses the same code (Suggestion 2)		EO don't want responsibility of all child centres using their parent centres single assigned code.	Audio players like VLC can be on mobile devices too - if the encryption on the audio still stands on the mobile version, then essentially, mobile phone can be used also instead of laptops - however consider the security of this possibility.
				Not comfortable with centre having their own assigned code - how often will this be changed?	
		Encryption code given by CA per session for all parent centre - all parent centres have the same code (Suggestion 3)		Not worried other centres having the same code - just need to be reassured that all the parent centres CA handles are trustworthy	

	Audio format within the process (CA - PC/Ministries - CC)	Security suggestions	Security measures willing to be taken by centre	Concerns/opinions	Suggestions/Comments
<b>Mexico</b>	Digital - Digital - Digital (ideal solution)	Digital file from end to end	Code the file itself - If venue don't have infrastructure and therefore come in to collect the digital file and test papers, code can be given on the day the materials are sent to be collected. If venue has infrastructure and can use digital platform, then code communicated via message on exam day.		
			Sign to say you have received the encryption code if supervisor physically come to collect it.		
			Centre would have back contact detail, in case principal contact cannot be reached to hand over code		
	Digital - Physical file transfer file - Receive file on device.	The centres create their own encryption code on the open file they receive from CA. They communicate this code via message to the centres. All of their child centres use this code (Suggestion 1)		Good idea as venues can at least only need one laptop which is feasible. Welcome the idea only if guidance is provided on how to do it	
		Encryption code given by CA for that specific centre - all child centres under that parent centre uses the same code (Suggestion 2)		Need to change password regularly vs. security risk of having the same password for long periods	Can have password that changes regularly however it will be in a format where the centre can figure it out if they have the exam information - so no need to stay on top of frequently changing passwords
				Already communicate to centre on exam day - happy to communicate the security code to venues.	
		Encryption code given by CA per session for all parent centre - all parent centres have the same code (Suggestion 3)		Risky but it CA okay with that then so are they. There is a chance for corrupt centres to make that code available out there, but the code needs the digital file in order for it to be relevant. And the digital file will only be available for centres via the solution.	

	Audio format within the process (CA - PC/Ministries - CC)	Security suggestions	Security measures willing to be taken by centre	Concerns/opinions	Suggestions/Comments
Spain	Digital - Digital - Digital (ideal solution)	Digital file from end to end	Assign someone specific to deal with the transferring of the files onto device if demand is not too much.		They have the ability to push equipment requirements to the venues so comfortable with many of the possible security suggestions, as this will only be a small number of centres - willing to do this for no more than 7 venues, if more they will push requirement or lose the venue.
	Digital - Physical file transfer file - Receive file on device.	The centres create their own encryption code on the open file they receive from CA. They communicate this code via message to the centres. All of their child centres use this code (Suggestion 1)		Open to doing this as encryption can be a code that they would know and if not they can figure out it.	
		Encryption code given by CA for that specific centre - all child centres under that parent centre uses the same code (Suggestion 2)		Great communication with centres on the day - can communicate code to centres	
	Encryption code given by CA per session for all parent centre - all parent centres have the same code (Suggestion 3)		Comfortable with this as for them a few centres will need the USB transfer option - they have the ability to push equipment requirements to the venues		