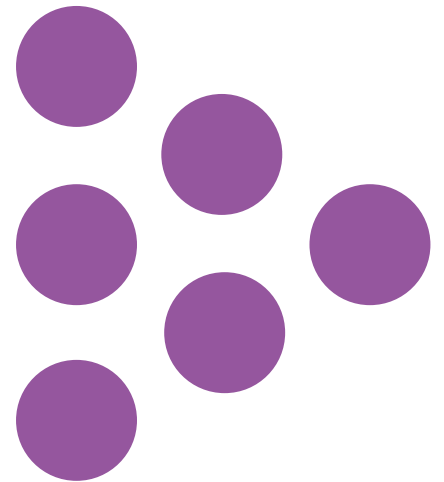

Transitioning from paper based to computer based assessments at a national level

Challenges & Opportunities

Louise Bailey - NFER



Presentation overview



Background to CBA

- large-scale assessments in UK



Outline of research study

- International transitions to CBA

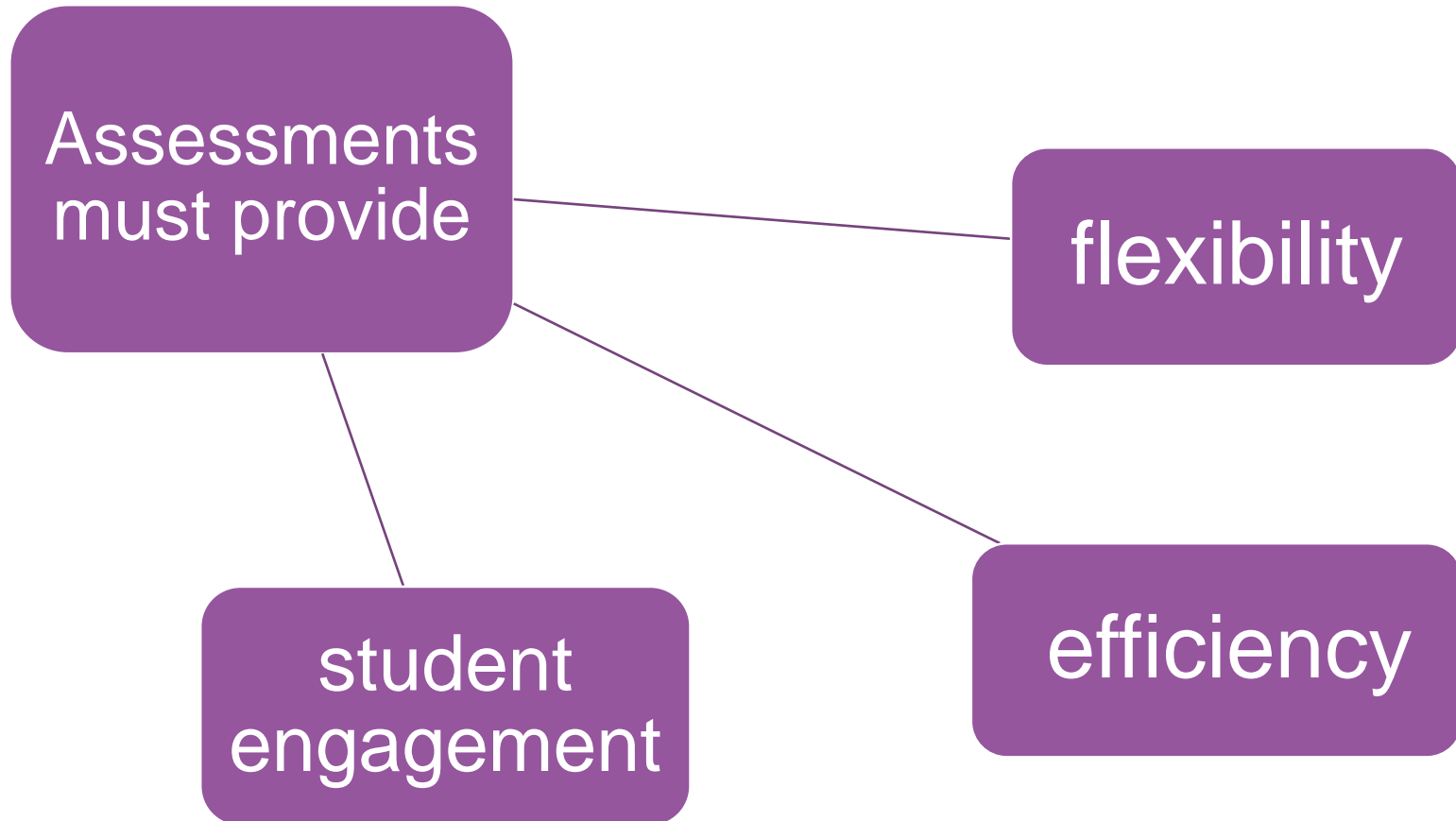


Looking to the future

- The next steps for CBA?



Rethinking the role of assessment... (Koomen & Zoanetti, 2016)



Does CBA more appropriately meet assessment needs?

flexibility

- No fixed time window required for test administration
- Ease of modifications – look / feel of assessments

efficiency

- Shorter testing - Computer Adaptive Testing (CAT)
- Shorter analysis periods
- In-depth reporting & performance analysis

engagement

- Much of students' lives take place online – ease & familiarity

CBA for large-scale assessments in the UK

Country	Current use of CBA
Northern Ireland	<ul style="list-style-type: none">• statutory onscreen testing since 2007• statutory online tests in literacy and numeracy introduced in 2012• discontinued in 2017
Scotland	<ul style="list-style-type: none">• statutory onscreen tests in reading, writing & numeracy for Primary 1,4,7 (4-11 years old) & Secondary 3 (13-14 years old) implemented 2017-2018
Wales	<ul style="list-style-type: none">• statutory onscreen tests in reading and numeracy (6-14 years old)• phased 3 year rollout from 2019
England	<ul style="list-style-type: none">• statutory onscreen times tables check (8-9 years old)• rollout in 2020

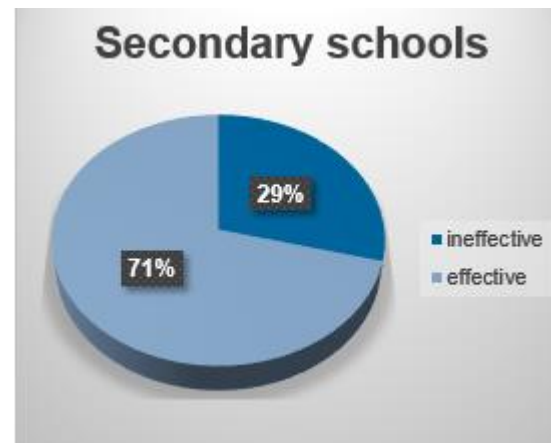
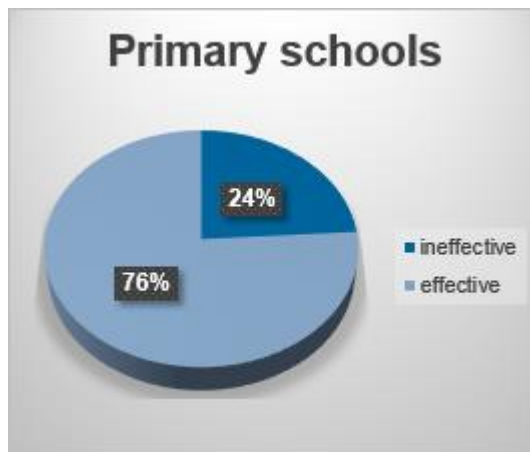
2. Factors which might affect the adoption of CBA

BROADBAND CONNECTIVITY

- disparity in coverage across the UK
- slower speeds in rural areas

SCHOOL COMPUTERS & DEVICES

- fairly large numbers but vast numbers are ineffective due to age



NFER interest in CBA

influenced
by...

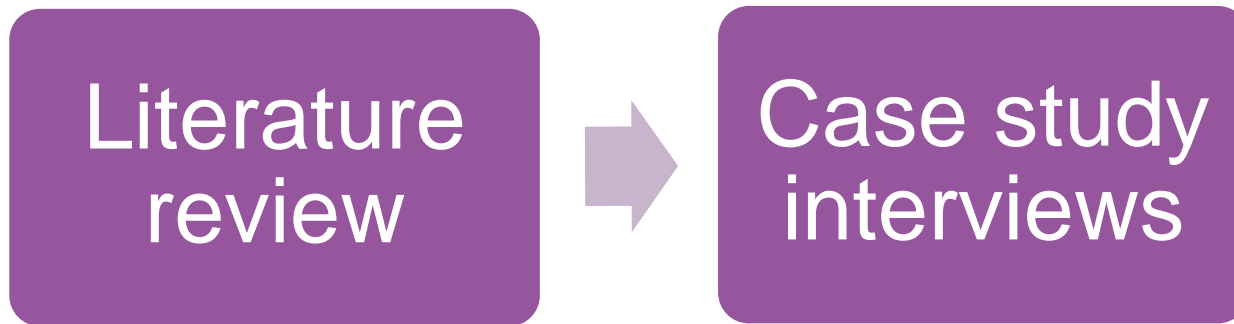
- **push for national CBA in Scotland & Wales**
- **situation in England - not yet started transition to CBA**

interest
in...

- **learning from other countries**
 - **the push factors**
 - **the pull factors**
 - **any barriers**

NFER research study..

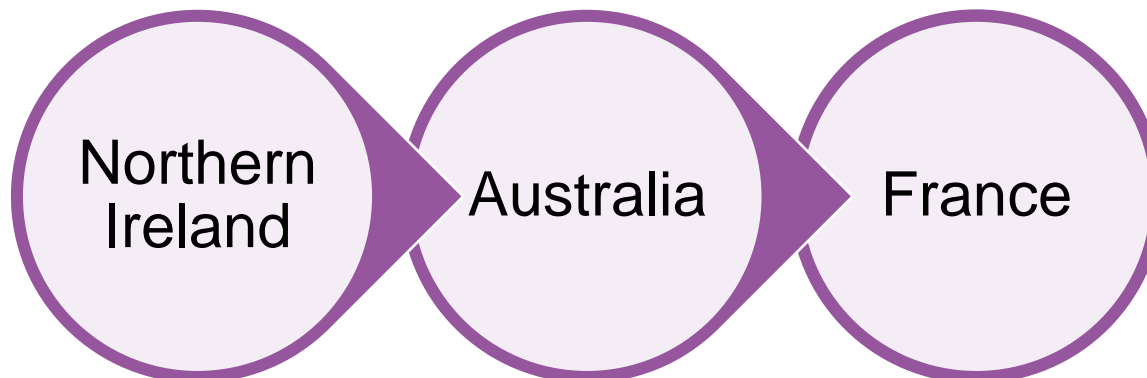
- had 2 aspects;



- **Case study interviews – involved officials from 3 countries, with involvement in transition to CBA**

Participant selection criteria...

Assessment type	Pupil age range	CBA solution
<ul style="list-style-type: none">Large-scale national assessments	<ul style="list-style-type: none">Within primary & secondary education range (5-16 years old)Could use CBA for either / or both.	<ul style="list-style-type: none">To include range of approaches;<ul style="list-style-type: none">open sourcecommercialbespokeadaptive testing



Countries taking part in study

	Assessment type	Pupil age range	CBA solution	Transition dates
Northern Ireland	National statutory tests	7-11 years old	Commercial solution Adaptive tests	2007-2013
France	National Surveys Nationwide assessments	Primary & Secondary	Open source solution Adaptive tests Online & offline models	2016
Australia	National statutory tests	8-15 years old	Bespoke solution Adaptive tests	2018 – opt in basis

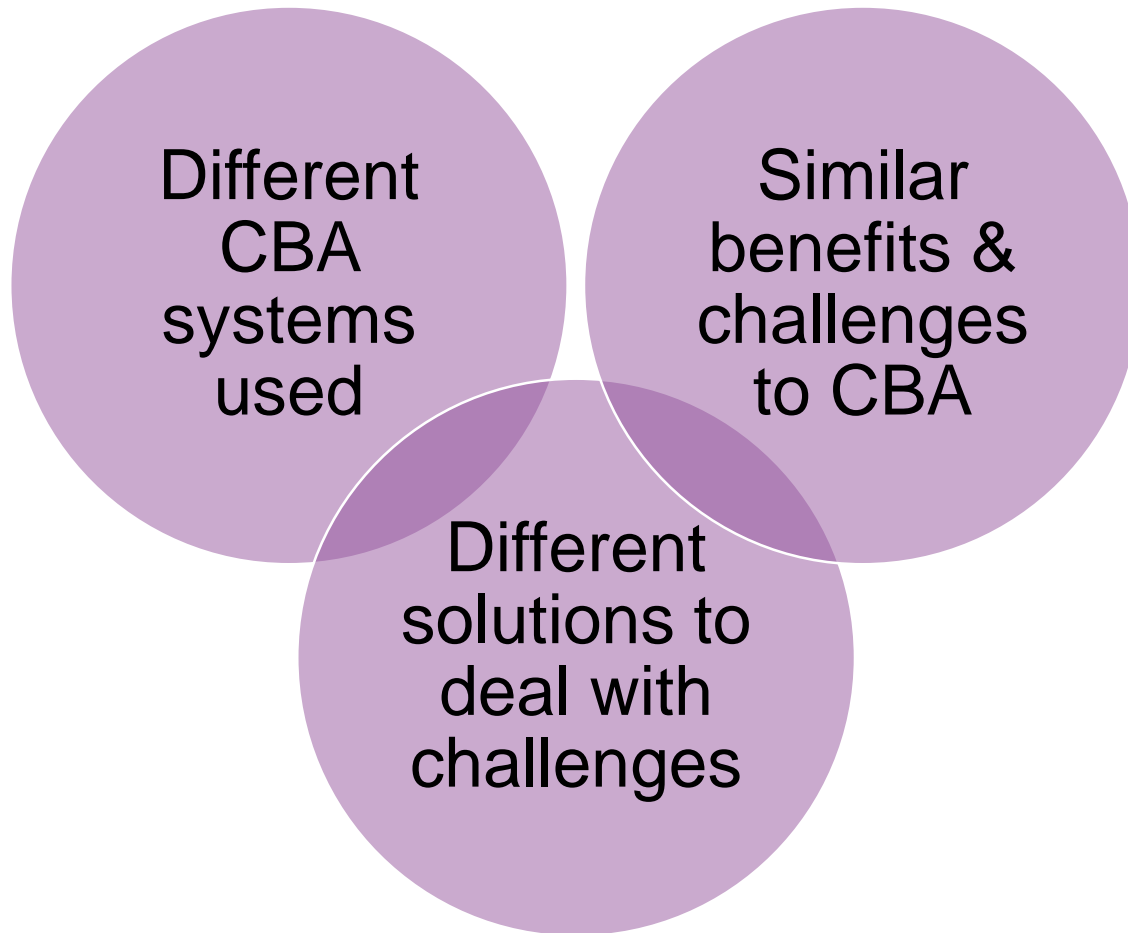
Research questions

What were the key drivers for moving to CBA?

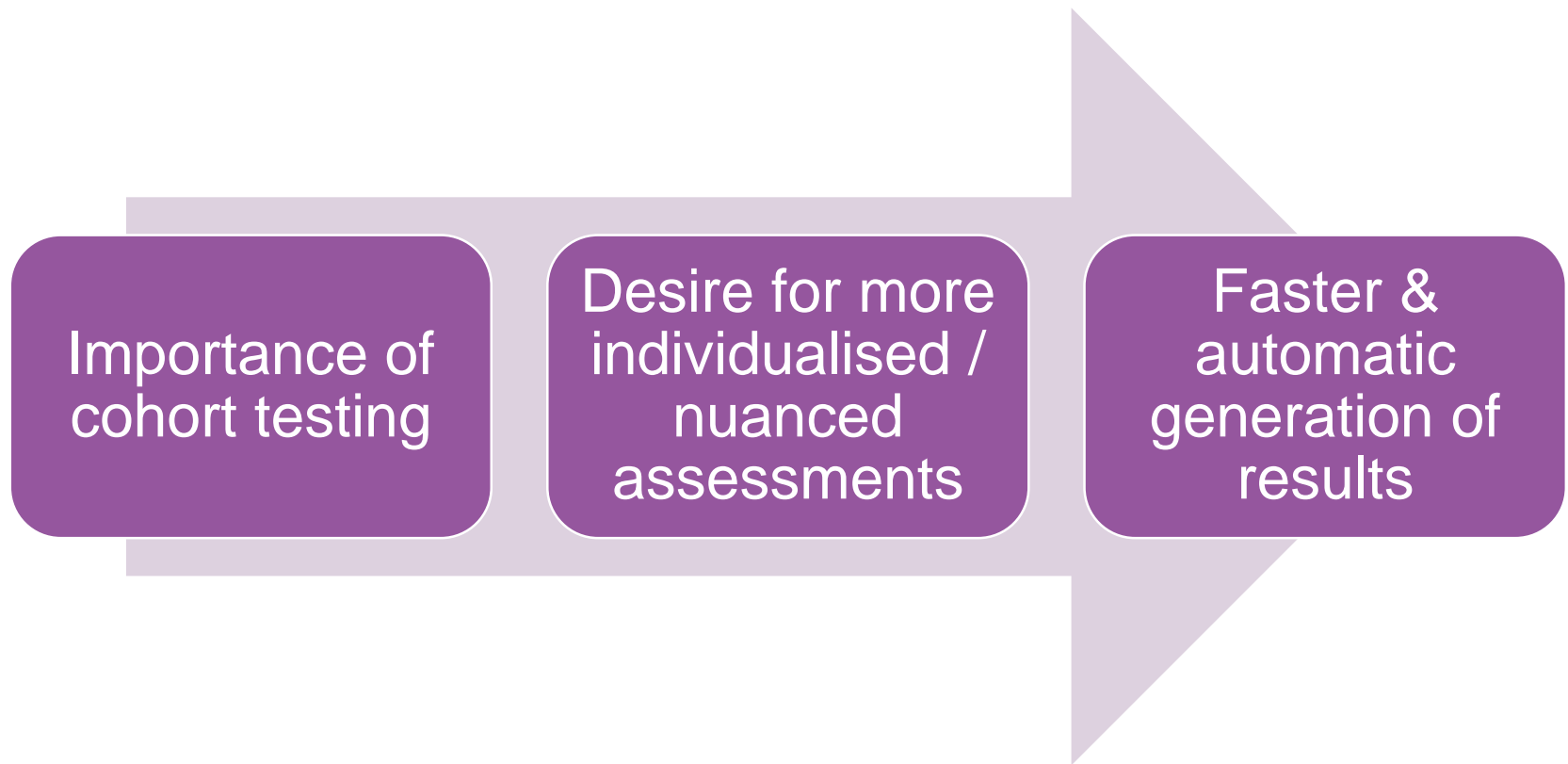
What have been the key successes in the use of CBA for large-scale assessment programmes?

What have been the challenges / barriers to using CBA for large-scale assessment programmes?

Overall Key findings



Key drivers



Key benefits to use of CBA

Backes & Cowan (2018)



Additionally;

- **Range of reporting options / Technology-Enhanced Items (TEIs)**

Key concerns & lessons learned from transition to CBA

Varying support for the move to CBA

Validity & reliability concerns

CAT – will students be presented with material from other year groups?

Difficulties in assessing certain subjects through CBA

Solutions to lack of infrastructure

Solutions to lack of infrastructure included;

increased funding
for additional
purchasing (laptops,
mice, headphones)

Technical support for
BYOD programmes

Key technical challenges & solutions used

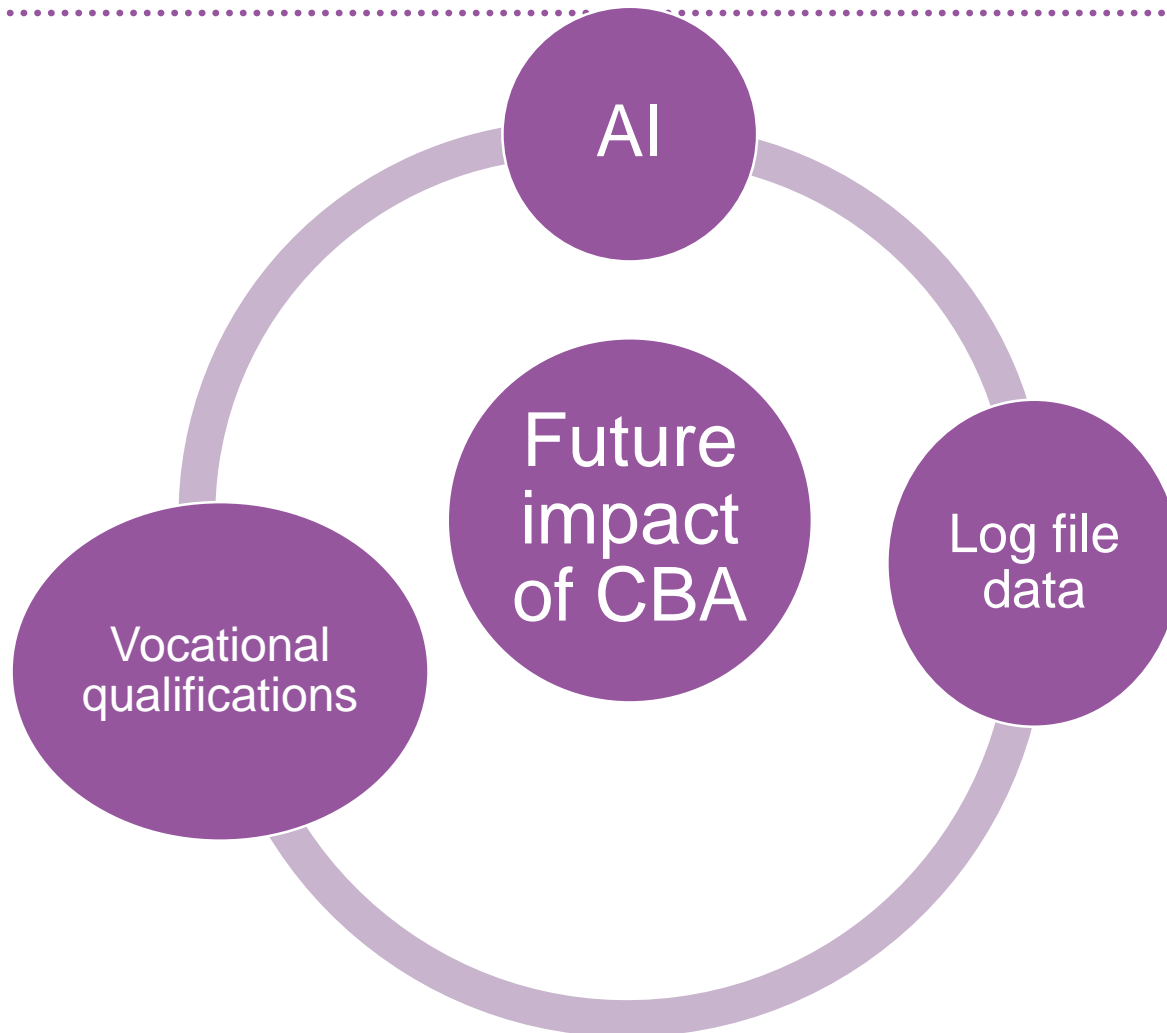
Solutions to technical issues included;

technical
readiness test
before assessment
period begins

hybrid solution –
assessments
delivered offline,
uploaded later

If using BYOD –
provision of lock-
down browsers

The future impact of CBA?



Any questions?



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References

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