Leading through change: workforce, culture and AI in official statistics

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NSIs face significant and growing pressures

- Traditional collection models are under pressure
- New data sources offer potential, but access and quality are uneven
- Users increasingly demand faster, more granular and more relevant statistics
- The authority of official statistics is increasingly contested
- Resources and legacy systems constrain delivery
- AI is introducing new demands as well as new opportunities

Workforce planning must begin with how statistical work is changing…

Responding to these pressures requires clear choices about quality, pace and delivery

		WHAT THIS MEANS	ONS RESPONSE
01	**PROTECT CORE QUALITY**	Prioritise quality and resilience over the volume of change.	Mission and business plan refocused on core statistics.
02	**SEQUENCE CHANGE REALISTICALLY**	Match ambition to capacity and avoid pursuing too much on too many fronts.	Tiering and the “Waiting Room” create explicit choices about what proceeds.
03	**REBUILD CONFIDENCE THROUGH DELIVERY**	Make progress visible and rebuild trust through sustained delivery.	Published improvement plans and regular progress updates.

The lesson: transformation must be grounded in realistic priorities and demonstrable delivery.

Making those choices stick requires leadership, openness and learning

		WHY IT MATTERS	HOW ONS IS APPLYING IT
01	**CREATE SPACE FOR EXCELLENCE**	Set people up to succeed with realistic ambition, capacity and support.	Leadership commitment and focus on development for middle managers.
02	**WORK IN THE OPEN**	Be transparent about errors and welcome challenge from users and external experts.	New approach to reporting errors and new forums for external challenge.
03	**SUPPORT, CHALLENGE AND LISTEN**	Surface concerns early and learn systematically - without defaulting to blame.	Monthly retrospectives, lessons from near misses and the SHIFT framework.

These same disciplines – realism, openness and accountability must now shape how NSIs adopt AI…

AI affects the whole statistical system – our focus here is production



Focusing on production, AI can shift effort towards higher-value work

EARLY EXAMPLES OF USE OF AI IN STATISTICS PRODUCTION

		AI CONTRIBUTION	HUMAN RESPONSIBILITY
01	**CLASSIFICATION (CLASSIFAI)**	Generates occupation, industry and product codes from free text.	Validate outputs, interpret context and make final decisions.
02	**SURVEY ASSIST**	Generates tailored follow-up questions when an initial response lacks detail.	Judge whether the resulting information supports reliable classification.
03	**RECEIPT PROCESSING**	Extracts and classifies data from scanned household receipts.	Validate extracted data and classifications before statistical use.

These examples demonstrate the value; the next challenge is embedding them safely and at scale….

AI adoption at scale needs an operating system - not just tools

01

SECURE TOOLS

Enterprise tools build broad AI fluency.

Targeted products transform priority statistical processes.

02

CLEAR GOVERNANCE & ASSURANCE

Governance supports staff to adopt and use these tools safely and effectively.

Testing, human review and monitoring remain explicit.

03

CONTINUOUS LEARNING & ADOPTION

Role-based skills and communities of practice support confident use.

Operational users shape services and improve them through feedback.

Everyone needs AI fluency; technical roles need stronger foundations

ADOPTION AT SCALE

OVER 5,000

active users of a secure general-purpose AI tool last month

OVER 100

data scientists use AI coding assistance every day

DEVELOPING CAPABILITY

FOR EVERYONE

AI FLUENCY

Understand what tools can and cannot do; give effective instructions.

VERIFICATION

Challenge outputs, check evidence and recognise when results are unreliable.

RESPONSIBLE USE

Keep clear human responsibility for statistical decisions, assurance and release.

FOR TECHNICAL ROLES

CODING FOUNDATIONS

Understand, review, test and maintain the code and systems AI helps to produce.

Production-grade AI requires coordinated multidisciplinary teams

A trusted service brings four capabilities together around a clearly defined statistical need.

01

STATISTICAL & OPERATIONAL EXPERTISE

Frame the need, apply domain knowledge and assure outputs are fit for statistical use.

02

MODEL DEVELOPMENT & EVALUATION

Build and test models; assess bias, failure modes and prompt-injection risk.

03

FRONT-END & USER EXPERIENCE

Enable effective human review through clear, usable decision points.

04

CLOUD ENGINEERING & SECURE OPERATIONS

Deploy scalable services with secure access, monitoring and resilience.

RESPONSIBLE AI • QUALITY ASSURANCE • ACCOUNTABILITY

Statistical expertise must both endure and evolve

The profession's distinctive value remains; its contribution must broaden.

The Future Statistician

Royal Statistical Society

Government Statistical Service

WHAT MUST ENDURE

RIGOROUS INFERENCE & JUDGEMENT

Apply proportionate analysis and know when human judgement is paramount.

OPENNESS & REPRODUCIBILITY

Make methods, uncertainty and limitations transparent and reviewable.

TRUSTED TRANSLATION

Turn complex evidence into clear advice for public decisions and outcomes.

WHAT MUST EVOLVE

TECHNOLOGY LEADERSHIP & RESPONSIBLE AI

Guide adoption, set standards and assure when technology should and should not be used.

COMMUNICATION IN AN ERA OF MISINFORMATION

Raise statistical literacy, explain trade-offs and defend against misuse.

MULTIDISCIPLINARY, EFFICIENT DELIVERY

Work across professions and build sustainable workflows that support reuse.

Build an adaptable workforce – and protect the trust at the core of official statistics

01

MEET THE SCALE OF CHANGE

Challenges and opportunities are significant; resilience and trust cannot be taken for granted.

02

LEAD WELL UNDER PRESSURE

Leadership and culture shape whether risks surface, organisations learn and AI is navigated responsibly.

03

BUILD CAPABILITY IN TEAMS

Look beyond individual skills: assemble multidisciplinary teams with the right overall expertise mix.

04

EVOLVE AND PROTECT THE CORE

Build AI fluency and technology leadership while preserving rigour, judgement, interpretation and public value.