

16th Management Seminar for Heads of National Statistical Offices in Asia and the Pacific
Transforming Institutions is Transforming People

**Session B: How to manage Human Resources in support of
Data Integration and Enhanced Uptake of New Data Sources?
- Singapore's Experience**

30 Nov - 1 Dec 2021

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Operating Context and Organizational Goal

Unlock Value of Data and Empower Data-Driven Insights

Changing Environment

Constantly changing economic and social landscape

Ever-increasing data flows and new technologies, and data-driven decision making

Greater evidence-based policy formulation

Key Role and Key Outcomes

- (i) Leading National Statistical Office: Compiles and disseminates national statistical indicators, provides statistical analyses with integrated data from diverse sources including admin and survey data, develops national statistical standards and classifications, and coordinates and advises on statistical matters
- (ii) Trusted Centre for Individual and Business data: Enables greater data sharing for policy analysis and planning and agency operations and service delivery purposes

Collection

- Knowledge of data and data sources
- Ability to apply latest technology
- Secured data collection channels
- Classification expertise
- Strong partnerships with data sources

Processing & Integration

- Expertise in coding, editing, imputation, and integration
- Expertise in managing integrated/ longitudinal databases
- Use of smart processing technology (e.g., predictive analytics)
- Secured data processing environment with encryption

Compilation

- Extensive experience developing economic and social indicators
- Strong knowledge of concepts, methodologies and standards
- Reconciliation expertise

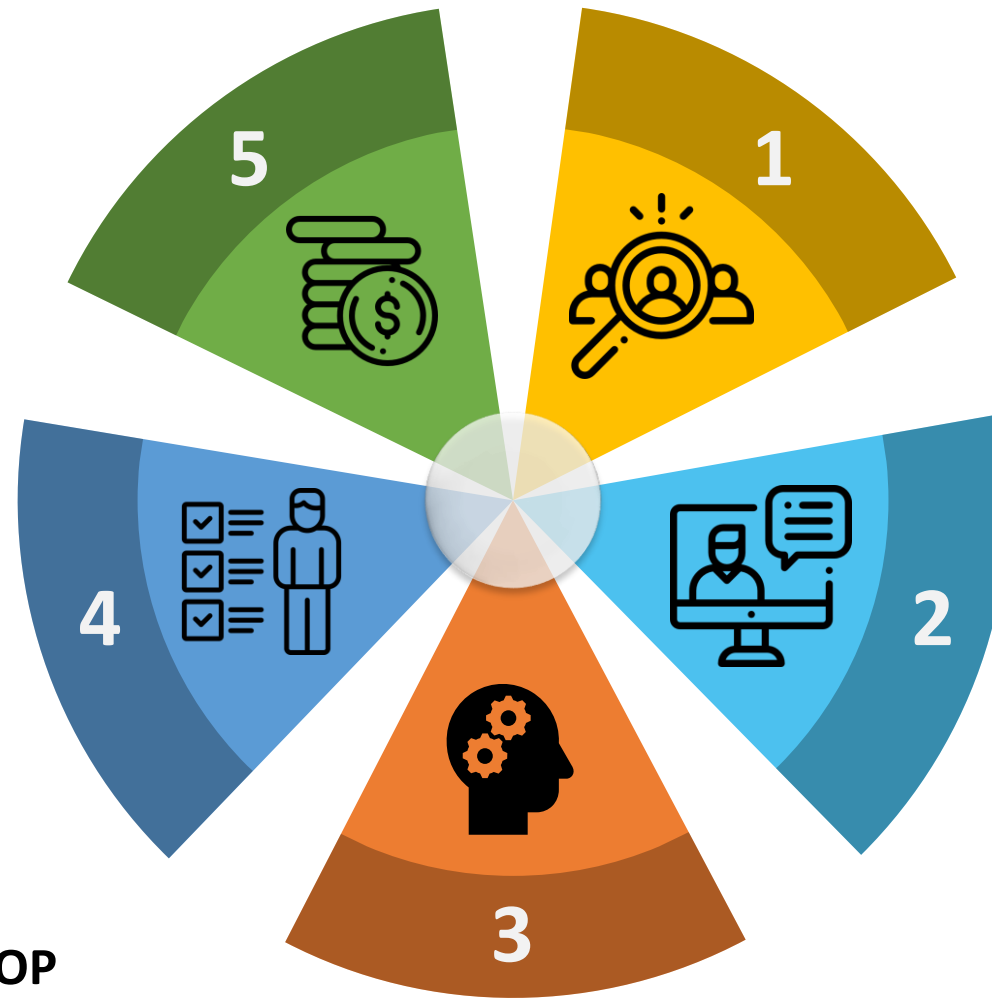
Analyses

- Deep domain knowledge and ability to link relevant data to subject matter
- Ability to undertake complex analytics (e.g., modelling, simulation, predictive analytics, hypothesis testing)

Dissemination & Engagement

- Strong trust in DOS's data
- Diverse data access platforms (including for user self-help using SingStat Table Builder and SingStat Mobile App)

HR Strategy Supporting and Enabling Transformation



ATTRACT AND SOURCE

- Workforce Planning
- Diversify Talent Recruitment Sources
- Strengthen Employer Branding

SELECT AND ALIGN

- Skills-based Selection Process with competency-based interview
- Onboard

DEVELOP

- Career and Capability Building
- Competency Framework and Learning Support
- Professional Development

GROOM AND DEPLOY

- Talent Identification and Leadership Development
- Deployment of talents

REWARDS

- Professional Scheme of Service
- Market Competitive Salaries



Attract and Source

Plan . Diversify Sources . Strengthen Branding

Identify manpower and skills requirements and gaps. Plan and continuously review and apply most appropriate sourcing approach to meet needs.

Diversify talent recruitment sources to reach out to a wider pool of qualified potential candidates:

- Fresh graduates via career fairs, partnerships and internships/traineeships with Institutes of Higher Learning on targeted recruitment at selected faculties, e.g. Data Science and Analytics, Information Systems, besides Economics, Mathematics and Statistics
- Mid-career via targeted outreach to large professional talent pool, e.g. mid-career data scientists/professionals

Strengthen Employer Branding

- Outreach efforts to increase mindshare among graduating students and data professionals
- Expand product offerings on website and mobile app as shop-front to students and data users
- Put employees first and create a positive work environment and culture for employees as brand ambassadors





Develop

Career and Capability Building



Strengthen Data and Statistical Capabilities

- Upskill officers performing data and statistical work and equip them with relevant and up-to-date competencies through **learning support**
- Create an agile workforce with broad understanding and appreciation of work beyond deep knowledge of specific subject matters through **Structured Job Rotations**
- Identify suitable openings in public agencies for officers to meet broader government data analytics and statistical needs and to provide wider learning opportunities for officers

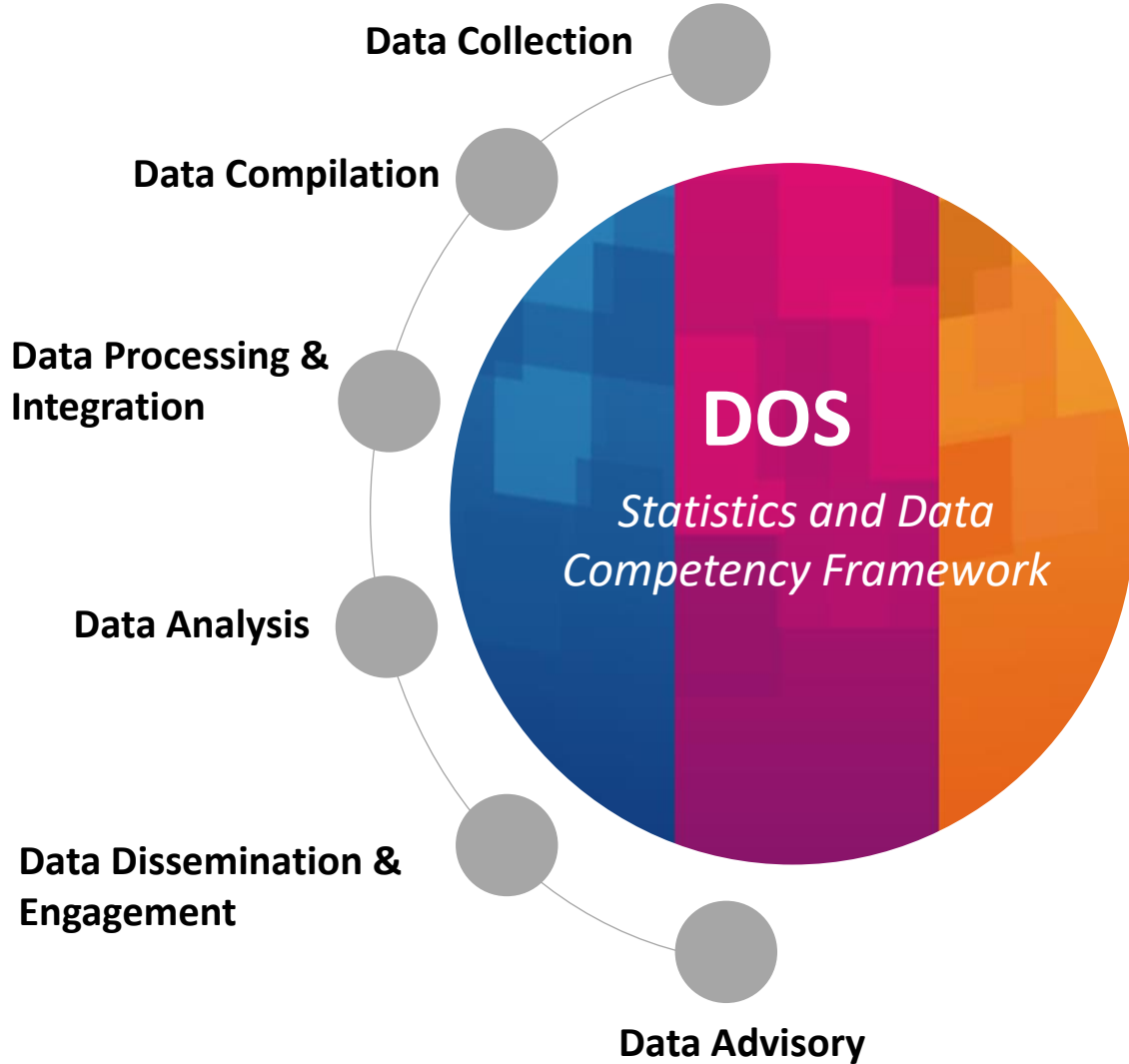


Build culture of continuous learning and development

- Encourage continuous learning with on-the-job training, regular sharing, online learning resources beyond formal/structured training courses
 - In-house workshops and staff sharing
 - Participation and contribution at international and regional statistical meetings
 - In-depth exchanges with other NSOs on methodologies, processes and technologies
- Enhance career and capability development opportunities for learning and collaboration via double-hatting, projects and workgroups beyond structured job rotation



Develop Competency Framework



Competency framework and supporting training roadmaps established to cater to officers' learning and development needs

Aligned to Vision and Mission

Competency categories and descriptors revolves around core functions, processes and work. Cover data competencies and statistical skills across the data value chain from collection to engagement.

Proficiency Levels and Training Roadmaps

Framework provides a guide on necessary Knowledge, Skills, Abilities, Other attributes (KSAOs) required by officers for corresponding level of proficiency and supporting training roadmap.

ADVANCED/EXPERT

In-depth knowledge of data management tools, methodologies, tactics, and skills to engage various stakeholders and transform operations

INTERMEDIATE

Knowledge of various instruments, research tools and standards, and manage various aspects of data operations

BASIC

Understand basic techniques and concepts, and perform basic data operations

Learning Support

Identify trainings, courses, tools and resources aligned to framework to equip officers in building relevant KSAOs.

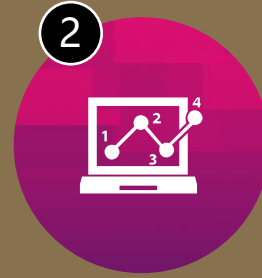


Develop Learning Support



Tools & Resources

Provide tools and learning resources useful and relevant to officers' work and in developing their data and statistical capabilities



Development Guide

Give a clear overview of suitable learning and development programs according to individuals' learning needs and competency level



Knowledge Sharing

Platform for knowledge-sharing

Topics

Data Management

- Collection
- Processing & Integration
- Compilation
- Analysis
- Dissemination & Engagement
- Advisory

Statistics

- Techniques
- Methodologies
- Analysis
- Prediction
- Forecasting

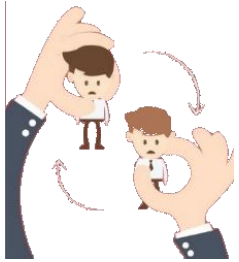
Statistical Programming

- R Studio
- SAS
- FAME
- Python



Develop

Professional Development . Varied Career Experiences



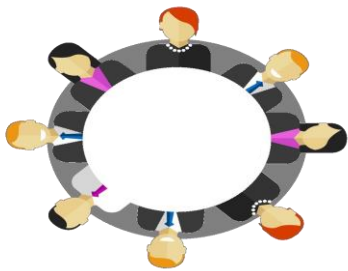
- **Structured Job Rotation programme**

Statisticians identified for rotation within and across sectors of specialisation to be trained in different areas



- **Double-Hatting**

Statisticians may double-hat in different work areas where there is synergy in cross-areas of work



- **Attachments to Major Projects and Workgroups within NSO and beyond**

- Officers from different units roped in to form part of the planning team(s) and workgroup(s) for major projects, e.g. Census of Population and classifications review
- Participation in inter-agency projects and workgroups to provide statistical advice and data support



Groom and Deploy

Talent Identification, Leadership Development & Talent Deployment

Officers with good potential identified and considered for further exposure through projects/workgroups, secondment and milestone programmes.

Leverages public sector programmes for training and attachments to gain different insights and exposure.

Statisticians seconded to a number of research and statistical units across the government to plug skills/knowledge/experience gaps. In turn, they are exposed to applying data in policy assessment and have greater familiarity with data sources, data issues of administrative systems and operations.



Thank You

Our Vision

National Statistical Service of Quality, Integrity and Expertise

Our Mission

*We Deliver Insightful Statistics and Trusted Statistical Services that
Empower Decision Making*

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