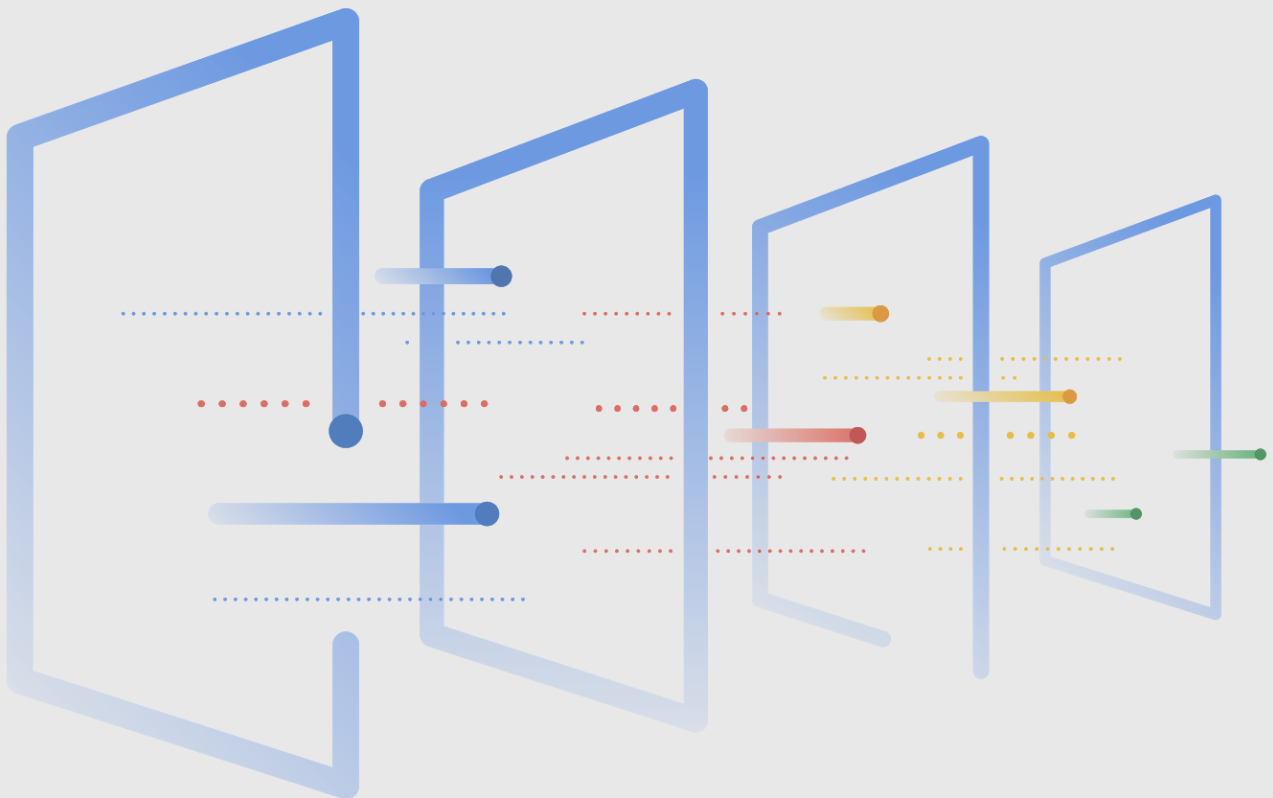




# ARTIFICIAL INTELLIGENCE IN THE DELIVERY OF PUBLIC SERVICES





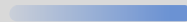
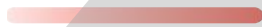
*The shaded areas of the map indicate ESCAP members and associate members.*

The Economic and Social Commission for Asia and the Pacific (ESCAP) serves as the United Nations' regional hub promoting cooperation among countries to achieve inclusive and sustainable development. The largest regional intergovernmental platform with 53-member States and 9 associate members, ESCAP has emerged as a strong regional think-tank offering countries sound analytical products that shed light on the evolving economic, social and environmental dynamics of the region. The Commission's strategic focus is to deliver on the 2030 Agenda for Sustainable Development, which it does by reinforcing and deepening regional cooperation and integration to advance connectivity, financial cooperation and market integration. ESCAP's research and analysis coupled with its policy advisory services, capacity building and technical assistance to governments aims to support countries' sustainable and inclusive development ambitions.

Google's mission is to organize the world's information and make it universally accessible and useful, and AI is now helping us move closer to this mission than ever before. As part of our commitment to [AI for Social Good](#), Google is focused on supporting governments, civil society, academia and SMEs to develop and apply AI for good. Google's partnership with UN-ESCAP is a key pillar of our efforts to do this in the Asia Pacific region.

The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

# Artificial Intelligence in the Delivery of Public Services



# ***ARTIFICIAL INTELLIGENCE IN THE DELIVERY OF PUBLIC SERVICES***

Reference to dollars (\$) are to United States dollars unless otherwise stated.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations or Google concerning the legal status of any country, territory, city or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Bibliographical and other references have, wherever possible, been verified. The United Nations and Google bear no responsibility for the availability or functioning of URLs.

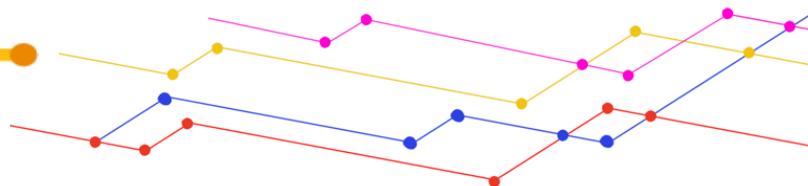
The views expressed in this publication are those of the authors or case study contributors and do not necessarily reflect the views of the United Nations or Google.

The opinions, figures and estimates set forth in this publication are the responsibility of the authors and contributors and should not necessarily be considered as reflecting the views or carrying the endorsement of the United Nations or Google. Any errors are the responsibility of the authors.

Mention of firm names and commercial products does not imply the endorsement of the United Nations or Google.

Any opinions or estimates reflected herein do not necessarily reflect the opinions or views of Members and Associate Members of the United Nations Economic and Social Commission for Asia and the Pacific or Google

## FOREWORD



The urgency to reach the ambitious Sustainable Development Goals by 2030 requires each government to find more innovative approaches for delivering effective, efficient and fair public services. While technologies hold great promise for improving government effectiveness and the delivery of public goods, frontier technologies such as artificial intelligence (AI) offer new opportunities to reimagine how governments and the public sector can better serve sustainable development needs. Fast-evolving technologies have the potential to transform the traditional way of doing things across all government functions and domains.

However, the success of using frontier technology for the delivery of public services cannot be taken for granted. A new technology often bears the risk of failure because either the technology is not mature, or the technology is not compatible with its underlying context such as institutional setting.

Although AI is a widely discussed topic today, case studies on how AI is actually applied in the public sector are rare. This report, therefore, aims to fill the gap and presents case studies on how governments and the public sector have applied AI to deliver public services. It highlights overarching patterns and insights across sectors and geographies and provides context-specific lessons and recommendations in the individual case studies.

I found the following findings in the report particularly inspiring in the context of 2030 Agenda for Sustainable Development.

- In India, an AI initiative by local government and Microsoft informs farmers of the best sowing date to increase crop yields. The best part of the project is that the investment required by the farmers to benefit from the technology is minimal: all they need are a mobile phone capable of receiving text messages and a subscription to the most basic mobile phone services. Clearly, to make a technology accessible and affordable is a crucial step towards technology for inclusiveness.
- In Israel, the "TradeMarker" system, based on AI and other advanced technologies, was developed by three students who responded to a challenge published by the Israeli Trademark Office. This case highlights how a competitive selection process may provide an effective way for discovering and initiating new applications of technology in the delivery of public services.

- Several case studies in this report highlight the importance of partnerships for the delivery of public services. While government agencies have the primary responsibility for the delivery of public services, their partners, especially technology firms, bring in the expertise and technologies related to AI necessary for the government initiatives to succeed.

Applying AI in the public sector is still at an early stage of development, and it is reasonable to expect setbacks in AI-related projects. While it is essential to exert due diligence in implementing such projects, a trial-and-error process may be inevitable. In this context it is essential that both governments and the public accept the failures as a beneficial part of the learning process in developing AI solutions.

I hope the ideas and case studies presented in this report will stimulate thinking on how government can effectively leverage advanced technologies for innovative and efficient delivery of public services. In implementing new technologies, we should be both ambitious and humble. Amid a digital revolution, we should never lose sight of people, planet, prosperity, peace and partnership, as enshrined in the 2030 Agenda. Guided by those ambitions, I am confident that more and more success stories of applying technologies in the public sector will emerge in the region in the years to come.

Mia Mikic



Director  
Trade, Investment and Innovation Division  
United Nations Economic and Social Commission for Asia and Pacific



## ACKNOWLEDGEMENTS

This publication was prepared through the collaborative efforts of Google, the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) and Digital Asia Hub, as well as a group of researchers.

At ESCAP, the work was carried out by the Trade, Investment and Innovation Division. Under the guidance of Mia Mikic, Director, and Jonathan Tsuen Yip Wong, Chief of the Technology and Innovation Section, Tengfei Wang and Cristen Bauer prepared the report. Chaveemon Sukpaibool formatted the report. Phadnalin Ngernlim and Yuvaree Apintanapong completed all administrative processing necessary to issue and launch the publication. Luisa Gonzalez Boa supported proofreading of the report when she worked as intern in ESCAP.

At Google, the work was led by Jake Lucchi, Head of Content and AI, Public Policy and Government Relations, Google Asia Pacific. Shimon Shmooley and Ross Young reviewed the draft chapters.

At Digital Asia Hub, the work was led by Malavika Jayaram, Executive Director, with the support of the core team of Samuel Chua, Project Fellow, and Patricia de Vries, Visiting Fellow.

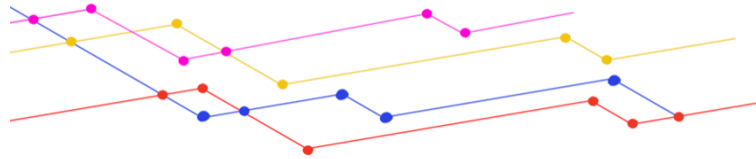
The following researchers contributed case studies to this publication:

- Elonnai Hickok, Arindrajit Basu, Siddharth Sonkar and Pranav M B; Centre for Internet and Society, India (Farming the Future: A case study of the deployment of artificial intelligence in the agricultural sector in Karnataka, India).
- Levin Kim and Ryan Budish; Berkman Klein Center for Internet and Society at Harvard University, United States (Australia's automated fraud detection).
- Karni Chagal-Feferkorn and Eldar Haber; University of Haifa, Israel (TradeMarker).
- Jenny Kennedy, Ellie Rennie and Julian Thomas; Technology, Communications and Policy Lab, Digital Ethnography Research Centre, RMIT, Australia (AI in Public Services: Nadia and other Australian examples).
- Michael Veale; University College London, United Kingdom (Machine learning and policing).
- Fabro Steibel and Ana Lara Mangeth; The Institute for Technology and Society of Rio de Janeiro, Brazil (Serenata de Amor: Artificial intelligence for financial transparency in Brazil).

The manuscript was edited by Mary Ann Perkins.



# CONTENTS



FORWARD .....	i
ACKNOWLEDGEMENTS .....	iii
SECTION ONE: SYNTHESIS .....	1
SECTION TWO: CASE STUDIES .....	8
Case Study 1: Farming the Future: deployment of artificial intelligence in the agricultural sector in Karnataka, India.....	9
Case Study 2: Australia’s automated fraud detection.....	16
Case Study 3: TradeMarker .....	24
Case Study 4: Machine learning and policing.....	32
Case Study 5: Serenata de Amor - Artificial intelligence for financial transparency in Brazil.....	43
REFERENCES .....	48

预览已结束，完整报告链接和二维码如下：

[https://www.yunbaogao.cn/report/index/report?reportId=5\\_975](https://www.yunbaogao.cn/report/index/report?reportId=5_975)

