

## *Foreword*

Early in 2011 the OECD began a project on *New Sources of Growth: Knowledge-based Capital* (KBC). The project was inspired by findings from the OECD’s *Innovation Strategy*, originally published in 2010 and now updated to 2015 (forthcoming). According to these findings, many innovating firms invest, beyond R&D, in a broader range of intangibles assets including i) intellectual property (e.g. patents, trademarks, copyrights, trade secrets, designs); ii) digital data and information (e.g. data and analytics); and iii) economic competencies (e.g. organisational capital and firm-specific skills). These intangible assets are referred to as knowledge-based capital (KBC).

This report focuses on digital data and analytics and their effects on innovation, growth and well-being. It aims to improve the evidence base on the role of data-driven innovation (DDI) in boosting productivity growth and contributing to well-being. It also offers policy guidance for maximizing the benefits of DDI and mitigating the associated economic and societal risks. The insights in the report are intended to help policy makers better understand DDI, incorporate its multidimensionality into policy design and “identify trade-offs, complementarities and unintended consequences of policy choices”. This report contributes to the goal of building and maintaining “resilient economies and inclusive societies” while enhancing the productivity and competitiveness of industries, as articulated in the OECD Ministerial Council Statements of 2014 and 2015.

The work on DDI has drawn on expertise from different directorates within the OECD. Supported with financial resources from the Secretary-General’s Central Priority Fund and in-kind contributions from the Netherlands, the Directorate for Science, Technology and Innovation led the two-year effort. Other partners have been the Directorate for Employment, Labour and Social Affairs, and the Directorate for Public Governance and Territorial Development. Owing to this co-operative effort, the publication’s different chapters were discussed and declassified by various OECD committees, including the Committee on Digital Economy Policy which had oversight responsibility for the project; the Committee on Consumer Policy; the Committee for Scientific and Technological Policy; the Health Committee; and the Public Governance Committee. The comments and inputs received from delegates to these official OECD bodies are gratefully acknowledged.

The material presented in this book will feed ongoing and future OECD projects, most notably the OECD project on the Next Production Revolution (NPR, <http://oe.cd/npr>). Further information on the work on DDI, including follow-up work, will be available on the OECD website, at <http://oe.cd/bigdata>.



## ACKNOWLEDGEMENTS

The work on Data-Driven Innovation represents an OECD collective effort led and co-ordinated by Christian Reimsbach-Kounatze (Information Economist and Policy Analyst, Division for Digital Economy Policy) under the guidance and oversight of Andrew Wyckoff (Director, Directorate for Science, Technology and Innovation), Jørgen Abild Andersen (Denmark), Chair of the OECD Committee on Digital Economy Policy, and Anne Carblanc (Head of Division, Division for Digital Economy Policy) provided directions and advice throughout the process.

Chapters 1, 2, 3, 4 and 6 were authored by Mr. Reimsbach-Kounatze. In particular, Chapter 1 (“The phenomenon of data-driven innovation”) benefited from input from Sabine Gerdon; Chapter 2 (“Mapping the global data ecosystem and its points of control”) from Andrea de Panizza and the Netherlands Organisation for Applied Scientific Research (TNO – Jop Esmeijer, Bas Kotterink, Anne F. van Veenstra, Tom Bakker, Merel Ooms, Anna van Nunen, and Silvain de Munck); Chapter 3 (“How data now drive innovation”) from Rudolf van der Berg; and Chapter 6 (“Skills and employment in a data-driven economy”) from Cristina Serra Vallejo, Sabine Gerdon and the Research Institute for Applied Knowledge Processing, Germany (FAW/n – Estelle L.A. Herlyn, Thomas Kämpke, Franz J. Radermacher, and Dirk Solte). Chapter 5 (“Building trust for data-driven innovation”) was authored by Laurent Bernat and Michael Donohue. Chapter 7 (“Promoting data-driven scientific research”) was written by Giulia Ajmone Marsan, with guidance from Mario Cervantes. Chapter 8 (“The evolution of health care in a data-rich environment”) was authored by Jillian Oderkirk and Elettra Ronchi. Chapter 9 (“Cities as hubs for data-driven innovation”) was written by David Gierten, with input from TNO. Chapter 10 (“Governments leading by example with public sector data”) was authored by Barbara Ubaldi, with contributions from Graham Vickery. Randall Holden edited the book and Janine Treves, James Arkinstall and Kate Brooks provided support with the overall presentation.

Some chapters benefited from additional expertise within the OECD through extensive rounds of comments. Special thanks therefore go to: John Davies (Competition Division of the Directorate for Financial and Enterprise Affairs); Vincenzo Spiezia (Economic Analysis and Statistic Division of the Directorate for Science, Technology and Innovation); Jesse Eggert, Eric Robert and Liz Chien (Digital Economy Team of the Center for Tax Policy and Administration); and Guillermo Montt (Division for Employment Analysis and Policy of the Directorate for Employment, Labour and Social Affairs).

Analysis and policy conclusions also benefited from advice provided by an international panel of independent experts including Devdatt Dubhashi (Professor, Department of Computer Science and Engineering, Chalmers University of Technology), Brett Frischmann (Director, Cardozo Intellectual Property & Information Law Program and Professor of Law, Benjamin N. Cardozo School of Law), Jakob Haesler (Co-founder, tinyclues), Simon Hania (Corporate Privacy Officer, TomTom), and Sarah Spiekermann (Head of the Institute for Management Information Systems,

Vienna University of Economics and Business). Thanks also go to Brian Kahin (Fellow at the MIT Sloan School Center for Digital Business) for his very informative comments. In addition, the report benefited from the advice of a panel of delegates drawn from the participating OECD committees. Many thanks go to Andre Loth (France), Emilio Garcia Garcia and Ruth Del Campo Becares (Spain), Tony O'Connor (United Kingdom), Hugh Stevenson and Stacy Feuer (United States), and Robin Wilton (Internet Technical Advisory Committee to the OECD).

The work on DDI and this book also benefited from discussions with the authors of some of the most prominent literature on “big data”. Thanks therefore go to: Kenneth Cukier and Viktor Mayer-Schönberger, the authors of “Big Data: A Revolution That Will Transform How We Live, Work and Think”; Robert Kirkpatrick and his team at United Nations Global Pulse for their work on big data for well-being and development; Carl Kalapesi and Joel Nicholson at the World Economic Forum (WEF) for their work on personal data and big data for development; Hasan Bakhshi and Juan Mateos-Garcia at Nesta for their work on the “datavores”; and Paul Hofheinz at the Lisbon Council and Michael Mandel at the Progressive Policy Institute (PPI) for their work on the transatlantic policy issues raised by big data.

Finally, two major events helped scope, develop and test analytic and policy ideas with academics, policymakers and practitioners. One was the *2012 Technology Foresight Forum* (<http://oe.cd/tff2012>), held at the OECD headquarters in Paris, France, on 22 October 2012; The second event was the *4th Global Forum on the Knowledge Economy* (GFKE, <http://oe.cd/gfke2014>), held in Tokyo, Japan, on 2-3 October 2014, and co-organised with, and hosted by, the Japanese Ministry for Internal Affairs and Communications and the Japanese Ministry of Economy, Trade and Industry. Special thanks go to the hosts, to Hajime Oiso, Aki Irie and Yuka Miyazaki who helped organise the GFKE, and to all the participants of both events.



**From:**  
**Data-Driven Innovation**  
Big Data for Growth and Well-Being

**Access the complete publication at:**  
<https://doi.org/10.1787/9789264229358-en>

**Please cite this chapter as:**

OECD (2015), "Foreword", in *Data-Driven Innovation: Big Data for Growth and Well-Being*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/9789264229358-2-en>

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to [rights@oecd.org](mailto:rights@oecd.org). Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at [info@copyright.com](mailto:info@copyright.com) or the Centre français d'exploitation du droit de copie (CFC) at [contact@cfcopies.com](mailto:contact@cfcopies.com).