Foundations of Digital Government

Leading and Managing in the Digital Era
# Contents

## 1 Introduction to Digital Government

1.1 The Changing Role of ICT ................................. 1
    1.1.1 How Has the Role of ICT in Government Changed? ... 2
    1.1.2 What Is Government? ............................... 3
    1.1.3 What Are the Characteristics of Government
          Organizations? ..................................... 4
    1.1.4 Can We Simply Use E-Business Concepts? .......... 4
    1.1.5 Outline of This Chapter ........................... 5

1.2 The Goal of Digital Government .......................... 6
    1.2.1 How Can We Transform the Relationship Between
          Government and Society? ......................... 6
    1.2.2 What Is Digital Government? ....................... 6

1.3 Digital Government Reform Paradigms .................... 8
    1.3.1 What Does the Participatory Approach Offer? ...... 8
    1.3.2 What Does the Managerial Approach Offer? ....... 9

1.4 Digital Government in Practice .......................... 11
    1.4.1 How Is Digital Government Evolving? ............... 11
    1.4.2 How Is Digital Government Development Measured? 13

1.5 Concept of the Book ................................... 14
    1.5.1 Who Should Read This Book? ....................... 14
    1.5.2 What Does Each Chapter Contain? ................. 15
    1.5.3 What Are the Key Learning Objectives of This Book? 15

References .................................................. 16

## 2 Impact of Digital Governments

2.1 Changes Induced by the Internet ......................... 19
    2.1.1 What Role Does the Internet Play? ................. 20
    2.1.2 Which Areas Are Affected? ........................ 21
    2.1.3 Outline of This Chapter ........................... 21

2.2 Impact on the Governance of Democratic Processes .... 22
    2.2.1 What Is Direct Democracy? ......................... 22
    2.2.2 What Is Representative Democracy? ................ 22
2.2.3 Which Democratic Governance Potential Is Enabled by the Internet? .................................................................................. 23
2.2.4 What Is the Downside of Digital Democracy? .................. 24
2.2.5 How Does Digital Democracy Affect the Representative Democratic System? ................................................................. 25

2.3 Impact on the Modernization of the Public Administration .... 29
2.3.1 What Are the Triggers? .......................................................... 29
2.3.2 What Are the Key Components? ........................................... 29
2.3.3 How Does Digitization Influence Public Service Delivery? ........................................................................................................... 30

References ..................................................................................... 32

3 The Digital Divide ......................................................................... 33
3.1 Introduction .............................................................................. 34
3.1.1 Why Is the Digital Divide Important? .............................. 34
3.1.2 Will the Digital Divide Phenomenon Disappear Eventually? .......................................................... 35
3.1.3 Will ICT Exacerbate or Ameliorate Social Inequality? ... 35
3.1.4 Outline of This Chapter .......................................................... 36

3.2 The Capability Approach ......................................................... 36
3.2.1 How Does the Capability Approach Relate to Other Theories of Justice? .......................................................... 36
3.2.2 What Are the Key Concepts of the Capability Approach? ........................................................................................................... 37
3.2.3 How Does the Capability Approach Relate to the Digital Divide? ............................................................................................. 38

3.3 A Multidimensional Concept ....................................................... 38
3.3.1 What Are the Different Dimensions of the Digital Divide? ........................................................................................................... 38
3.3.2 What Is Meant by ICT? .......................................................... 39
3.3.3 What Is Meant by Access? ...................................................... 39
3.3.4 What Distinguishes Advantaged and Disadvantaged Groups? ........................................................................................................... 41

3.4 European Digital Divide Initiatives ............................................ 43
3.4.1 What Is the Digital Agenda? .................................................. 43
3.4.2 What Are Examples of European Initiatives Fighting to Close the Digital Divide? .......................................................... 44

3.5 Consequences of the Digital Divide for Digital Government .... 46
3.5.1 How Does the Digital Divide Influence Public Service Delivery? ............................................................................................. 46
3.5.2 How Does the Digital Divide Influence Political Processes? ............................................................................................. 47

References ..................................................................................... 48
4 Legal Aspects of Digital Service Delivery .................................................. 51
  4.1 Introduction ......................................................................................... 52
    4.1.1 What Is the Legal Basis of Digital Government? ......................... 52
    4.1.2 What Is the Rule of Law and Its Effect on Governmental Digitization? ................................. 53
    4.1.3 Outline of This Chapter .............................................................. 54
  4.2 Secure and Trustworthy Communication ........................................... 54
    4.2.1 What Do the Concepts of Authenticity, Integrity, and Verifiability Mean? ................. 54
    4.2.2 What Is an Electronic Signature? .............................................. 56
  4.3 Data Privacy ....................................................................................... 60
    4.3.1 How Does One Ensure Data Privacy in Digital Government Management? .......... 60
    4.3.2 How Can Data Privacy Be Implemented? ..................................... 60
    4.3.3 How Does One Technically Conceptualize Secure Data Transactions? ......................... 62
  4.4 Equal Opportunities Principle .......................................................... 65
    4.4.1 What Is the Effect of the Equal Opportunities Principle? ................ 65
References ................................................................................................. 66

5 Online One-Stop Government ................................................................. 67
  5.1 Introduction ......................................................................................... 68
    5.1.1 What Is the Vision of Online Public Service Delivery? ................. 68
    5.1.2 Outline of the Chapter .............................................................. 69
  5.2 Digital Era Governance ...................................................................... 70
    5.2.1 What Are the Determinants of the Paradigm Shift in Digital Era Governance? .......... 70
    5.2.2 What Is Online One-Stop Government? ..................................... 70
    5.2.3 How Does Integration of Services Work? ..................................... 71
    5.2.4 What Does the Life-Event Metaphor Mean? ................................. 72
    5.2.5 How Does the Prototype “E-Government Service Marketplace (eGovSM)” Function? .......... 74
    5.2.6 What Does Interoperability of E-Government Services Mean? ................. 78
    5.2.7 What Is an Interoperability Framework for G2G Data Exchange? ................. 80
    5.2.8 How Can One Increase the Adoption of Interoperability Standards? ................. 81
    5.2.9 What Are Network Externalities? .............................................. 81
    5.2.10 What Are the Determinants of Adoption in the Public Sector? ................. 83
References ................................................................................................. 85
6 Open Government

6.1 Introduction

6.1.1 Who Are the Political Pioneers of Open Government?

6.1.2 What Are the Shortcomings of the Online One-Stop
Government Paradigm?

6.1.3 Is Secrecy in Government Possible Anyway?

6.1.4 Outline of This Chapter

6.2 Transparency

6.2.1 Why Should Administrations Publish Their Data?

6.2.2 What Are the Challenges of Implementing Open Data?

6.3 Participation and Collaboration

6.3.1 What Is the Purpose of Citizen-Sourcing?

6.3.2 What Are the Means to Collect the Wisdom of
the Crowd?

6.3.3 What Are the Challenges of Open Participation and
Collaboration?

6.4 Evaluating Open Government Initiatives

6.4.1 Why Transparency Might Be Better Than Secrecy?

6.4.2 How Can Open Government Be Strategically Used?

References

7 E-Procurement

7.1 Introduction

7.1.1 What Is E-Procurement?

7.1.2 Why Is E-Procurement Important?

7.1.3 What Is the Difference to Private Sector Procurement?

7.1.4 Outline of This Chapter

7.2 Legal Framework

7.2.1 What Are the International Obligations in Public
Procurement?

7.2.2 Which Tendering Procedures Are Allowed?

7.2.3 How Relevant Are International Obligations for Public
Administrations?

7.3 Implementation Perspective

7.3.1 What Functionalities Are Needed for E-Procurement?

7.3.2 What Are the Most Common Tools Used for
E-Procurement?

7.3.3 Is There a Centralized “One Size Fits All Solution”? 

7.4 E-Procurement in Practice

7.4.1 How Does a Public Administration Implement
E-Procurement?

7.4.2 What Are Best Practices?

References
8 E-Voting ................................................. 119
  8.1 Introduction ....................................... 120
    8.1.1 What Is the Goal of Voting Systems? .... 120
    8.1.2 What Is E-Voting? ......................... 121
    8.1.3 Is E-Voting the Silver Bullet to Modernize
           Democracy? .................................. 122
    8.1.4 Outline of This Chapter .................. 123
  8.2 Voting Machines ................................. 123
    8.2.1 Which Voting Technologies Are Available? 123
    8.2.2 What Are the Pro and Cons of DREs? ...... 123
    8.2.3 What Are the Pro and Cons of Optical Scan
           Technology? ................................ 126
  8.3 Internet Voting .................................. 128
    8.3.1 What Is Internet Voting? .................. 128
    8.3.2 Why Internet Voting? ....................... 129
    8.3.3 What Are the Concerns About Internet Voting? 129
    8.3.4 How Can a Transition to Internet Voting Be Realized? 130
  8.4 E-Voting in Practice ............................ 132
    8.4.1 Why Administrators Tend to Implement E-Voting? 132
    8.4.2 What Is a Best Practice? ................. 133

References ............................................. 135

9 E-Participation ...................................... 137
  9.1 Introduction ..................................... 138
    9.1.1 What Is E-Participation? ................. 138
    9.1.2 What Is the Political Decision-Making Process? 138
    9.1.3 What Is Citizen Participation? .......... 141
  9.2 E-Participation Framework ..................... 144
    9.2.1 What Level of Detail, or How Far to Engage Citizens? 144
    9.2.2 When to Engage? .......................... 144
    9.2.3 Who Should Be Engaged and by Whom? ...... 145
    9.2.4 How and with What to Engage? ............ 145
    9.2.5 How Can You Systemize E-Participation Initiatives? 145
  9.3 Implementation of E-Participation Initiatives 146
    9.3.1 How Can E-Participation Initiatives Be Implemented? 146
    9.3.2 How Can the Effect of E-Participation Initiatives Be
           Evaluated? ................................ 149

References ............................................. 154

10 Lesson Learned and Outlook ..................... 155