

Contents

Acknowledgements / ix

Introduction / xi

1 Digital futures in current contexts / 1

Introduction / 1

Information revolution in a wired world / 2

Information explosion / 5

The nature of digital data / 6

The storage and transmission of digital data / 8

Developments in digital data creation / 9

Printing and publishing / 12

Changes in libraries / 15

Digital libraries / 20

Automating information retrieval / 22

The world wide web / 25

Why the world wide web is not a digital library / 25

Changing names for managing content / 26

Conclusion / 28

2 Why digitize? / 30

Introduction / 30

Practical and strategic issues in the digitization of
library collections / 31

The benefits of digitization / 32

Formats of materials for digitization /	33
What does a digitization project involve? /	34
The digital lifecycle approach /	36
Running a digitization project /	37
Digitization projects and the management of risk /	38
Some example projects /	39
Digital library programmes /	53
Conclusion /	56

3 Developing collections in the digital world / 58

Introduction /	58
Why digital? /	59
Advantages of digital data /	61
The new universal library: the distributed hybrid library /	61
Collection development: just in case, or just in time? /	63
Digital content and its supply /	66
Electronic serials /	67
Reference works /	74
E-books /	76
Conclusion /	82

4 The economic factors / 84

Introduction /	84
The cost and benefit relationship of digital content /	86
Breaking even in the digital library /	88
Opportunity costs /	90
Optimizing spending in digital content creation /	91
Identifying cost factors /	92
Purchasing digital content /	94
The cost of managing digital content /	98
Reaping the rewards /	100
Conclusion /	103

5 Resource discovery, description and use / 106

Introduction /	106
The world wide web: structure /	107
The world wide web: content /	108

- Libraries and the web / 108
- Search engines and their limitations / 109
- Resource description / 111
- Metadata / 112
- Types of metadata / 115
- Metadata schemas / 121
- Other metadata systems / 128
- Collection-level description / 131
- Metadata creation / 132
- Collaborative projects in resource description and discovery / 133
- Conclusion / 134

- 6 Developing and designing systems for sharing digital resources / 136**
 - Introduction / 136
 - Digital libraries and communication / 137
 - The functionality overlap in digital library environments / 138
 - Interoperability / 140
 - Digital library structures / 143
 - Protocols and standards / 149
 - Designing for sustainable development / 153
 - Conclusion / 156

- 7 Portals and personalization: mechanisms for end-user access / 158**
 - Introduction / 158
 - Defining the users' digital content dilemma / 159
 - Delivering content with portals / 160
 - The portal as a community tool / 162
 - The importance of content / 164
 - Branding and marketing in the portal arena / 167
 - Some example projects / 169
 - Personalization / 174
 - Conclusion / 177

- 8 Preservation / 178**
 - Introduction / 178
 - The scale of the digital preservation problem / 179
 - Preserving the written heritage / 181

Preservation through surrogacy	/	183
Authenticity of digital data	/	185
Surrogate versus original	/	187
Case Study: The great newspaper debate	/	188
Digital surrogacy: is it a preservation alternative?	/	189
Why data needs preservation	/	190
How is digital data to be preserved?	/	193
Methods of preservation of digital materials	/	195
Preservation metadata	/	203
Rights management	/	205
National and international initiatives in digital preservation	/	205
Conclusion	/	207

9 Digital librarians: new roles for the Information Age / 209

Introduction	/	209
The current state of libraries: shifting sand and contrasts	/	211
What is librarianship in the digital future?	/	213
Buildings or bytes: librarians are not defined by the library infrastructure	/	215
New roles in the digital era	/	217
Key skills for digital librarians	/	220
Training and education	/	225
Organizational cultures and management styles	/	228
Prepared for change, flexible in all things and ready for competition	/	229
Conclusion	/	230

Digital futures . . . / 232

Introduction	/	232
Some new developments	/	233
The information explosion revisited	/	235
Legality and ownership in the digital future	/	238
Bridging the digital divide	/	239
Conclusion	/	240

Bibliography / 243

Glossary / 260

Index / 267