

# CONTENTS

<b>Foreword by David Corrigan</b>	<b>vii</b>
<b>Foreword by Inderpal Bhandari</b>	<b>ix</b>
<b>PART I: Big Data Integration and Governance with IBM InfoSphere</b>	
<b>Chapter 1: An Introduction to Big Data Governance</b>	<b>1</b>
<b>Chapter 2: The Big Data Governance Framework</b>	<b>5</b>
2.1 Big Data Types	6
2.2 Information Governance Disciplines	8
2.3 Industry and Functional Scenarios for Big Data Governance	11
<b>Chapter 3: The IBM Big Data Platform</b>	<b>15</b>
3.1 IBM Big Data Products	16
3.2 IBM Big Data Platform Differentiators	20
<b>Chapter 4: Big Data Integration</b>	<b>23</b>
4.1 Bulk Data Movement	23
4.2 Data Replication	27
4.3 Data Virtualization	28
<b>Chapter 5: Metadata</b>	<b>31</b>
5.1 Establish a Glossary That Represents the Business Definitions for Key Big Data Terms	32
5.2 Tag Sensitive Big Data Within the Business Glossary	34
5.3 Maintain Technical Metadata to Support Data Lineage and Impact Analysis	34
5.4 Gather Metadata from Unstructured Documents to Support Enterprise Search	37
<b>Chapter 6: Big Data Security and Privacy</b>	<b>39</b>
6.1 Identify Sensitive Big Data	40
6.2 Flag Sensitive Big Data Within the Metadata Repository	41
6.3 Mask Sensitive Big Data in Production and Non-Production Environments	42
6.4 Monitor Access to Sensitive Big Data by Privileged Users	44
<b>Chapter 7: Big Data Quality</b>	<b>49</b>
7.1 Leverage Semi-Structured and Unstructured Data to Improve the Quality of Sparsely Populated Structured Data	50

7.2	Use Streaming Analytics to Address Data Quality Issues In-Memory Without Landing Interim Results to Disk	52
7.3	Cleanse Big Data Before or After Processing in Hadoop	55
<b>Chapter 8: Master Data Integration</b>		<b>57</b>
8.1	Improve the Quality of Master Data to Support Big Data Analytics	59
8.2	Leverage Big Data to Improve the Quality of Master Data	60
8.3	Improve the Quality and Consistency of Key Reference Data to Support the Big Data Governance Program	62
8.4	Extract Meaning from Unstructured Text to Enrich Master Data	62
8.5	Enrich Customer Master Data with Insights from Social Media to Create Social MDM	67
8.6	Turbo-Charge MDM with Hadoop Technologies	69
<b>Chapter 9: Managing the Lifecycle of Big Data</b>		<b>71</b>
9.1	Expand the Retention Schedule to Include Big Data Based on Local Regulations and Business Needs	72
9.2	Document Legal Holds and Support eDiscovery Requests	72
9.3	Compress and Archive Big Data on Hadoop to Reduce Storage Costs	73
9.4	Archive Big Data in Immutable Format with Seamless Access to Hadoop for Analytics	74
9.5	Manage the Lifecycle of Real-Time, Streaming Data	74
9.6	Defensibly Dispose of Big Data No Longer Required Based on Regulations and Business Needs	75
<b>PART II: Process Data Governance with IBM InfoSphere</b>		
<b>Chapter 10: An Introduction to Process Data Governance</b>		<b>77</b>
<b>Chapter 11: Retail Case Study: Process Data Governance of Social Media</b>		<b>79</b>
<b>Chapter 12: Oil and Gas Case Study: Process Data Governance of Sensor Data</b>		<b>81</b>
<b>Chapter 13: Healthcare Case Study: Process Data Governance of Big Claims Transaction Data</b>		<b>87</b>
13.1	A Primer on Claim Codes Used by Health Plans	88
<b>Notes</b>		<b>93</b>
<b>Appendix: Reviewer and Contributor Profiles</b>		<b>95</b>