

The ISO 14001:2015 Companion

Garry Cornell

The ISO 14001:2015 Companion

*A Straightforward Guide to Implementing an EMS
in a Small Business*

Advisera Expert Solutions Ltd
Zagreb, Croatia

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TABLE OF CONTENTS

ABOUT THE AUTHOR.....	5
LIST OF FIGURES	11
1. INTRODUCTION.....	13
1.1 WHY ENVIRONMENTAL MANAGEMENT? WHY ISO 14001?... 13	
1.2 BASIC ENVIRONMENTAL MANAGEMENT PRINCIPLES..... 15	
1.3 PURPOSE OF ISO 14001	18
1.4 WHO SHOULD READ THIS BOOK?..... 19	
1.5 HOW TO READ THIS BOOK..... 21	
1.6 WHAT THIS BOOK IS NOT	22
1.7 ADDITIONAL RESOURCES	23
2. WHAT EXACTLY IS ISO 14001?.....	24
2.1 THE MOST POPULAR ENVIRONMENTAL MANAGEMENT STANDARD WORLDWIDE	24
2.2 HOW DOES ISO 14001 WORK?..... 26	
2.3 WHAT ISO 14001 IS NOT – THE MOST COMMON MYTHS 28	
2.4 WHERE DOES ENVIRONMENTAL MANAGEMENT BELONG? 30	
2.5 FOR WHICH TYPE AND SIZE OF COMPANY IS ISO 14001 INTENDED?	32
2.6 SHORT HISTORY OF ISO 14001	33
2.7 THE STRUCTURE AND MAIN CLAUSES OF THE STANDARD	34
2.8 INTRODUCTION TO THE ENVIRONMENTAL MANAGEMENT SYSTEM	36
2.9 ISO 14001 CERTIFICATION PROCESS..... 40	
2.10 CERTIFICATION VS. REGISTRATION VS. ACCREDITATION..... 43	
2.11 REQUIREMENTS FOR CERTIFICATION BODIES	45
3. GETTING SUPPORT FROM YOUR MANAGEMENT AND OTHER EMPLOYEES	47
3.1 HOW TO CONVINCE YOUR TOP MANAGEMENT TO IMPLEMENT ISO 14001..... 47	
3.2 HOW TO PRESENT THE BENEFITS TO YOUR TOP MANAGEMENT .. 51	
3.3 DEALING WITH LINE MANAGERS AND OTHER EMPLOYEES	54

3.4	BRIDGING THE GAP BETWEEN ENVIRONMENT AND THE BUSINESS.....	56
3.5	SUCCESS FACTORS	57
4.	PREPARING FOR THE IMPLEMENTATION	59
4.1	ISO 14001 STRATEGY: THREE OPTIONS FOR THE IMPLEMENTATION.....	59
4.2	HOW TO CHOOSE A CONSULTANT?	62
4.3	SHOULD YOU CARRY OUT A GAP ANALYSIS?	63
4.4	SEQUENCE OF IMPLEMENTING ISO 14001 & RELATIONSHIP WITH PDCA CYCLE	65
4.5	SETTING UP AN ISO 14001 IMPLEMENTATION PROJECT.....	67
4.6	WHO SHOULD BE THE PROJECT MANAGER?	69
4.7	HOW LONG DOES IT TAKE?.....	71
4.8	HOW MUCH DOES IT COST?	74
4.9	USING TOOLS, TEMPLATES AND SOFTWARE.	77
4.10	DECIDE ON YOUR DOCUMENTATION STRATEGY.....	80
4.11	SUCCESS FACTORS	81
5.	FIRST STEPS IN THE PROJECT.....	83
5.1	UNDERSTANDING THE CONTEXT OF YOUR COMPANY (CLAUSE 4.1)	83
5.2	LISTING INTERESTED PARTIES AND THEIR REQUIREMENTS (CLAUSE 4.2)	86
5.3	DEFINING THE EMS SCOPE (CLAUSE 4.3).....	89
5.4	WHAT IS REQUIRED OF THE TOP MANAGEMENT (CLAUSE 5.1) ..	91
5.5	MEETINGS AND MANAGING ACTIONS (CLAUSE 5.1).....	93
5.6	WRITING THE ENVIRONMENTAL POLICY (CLAUSE 5.2).....	96
5.7	DEFINING TOP-LEVEL EMS OBJECTIVES (CLAUSE 6.2)	99
5.8	ROLES AND RESPONSIBILITIES, AND HOW TO DOCUMENT THEM (CLAUSE 5.3)	102
5.9	SUCCESS FACTORS	103
6.	RESEARCH AND PLANNING	105
6.1	ADDRESSING RISKS AND OPPORTUNITIES (CLAUSE 6.1.1)	106
6.2	THE RISK ASSESSMENT METHODOLOGY (CLAUSE 6.1).....	109
6.3	APPLYING RISK AND OPPORTUNITY IN ENVIRONMENTAL MANAGEMENT (CLAUSE 6.1).....	113

6.4	IMPACTS FROM OUTSOURCED SERVICES (CLAUSE 8.1)	117
6.5	LIFE CYCLE THINKING (CLAUSE 8.1).....	118
6.6	ADDRESSING ENVIRONMENTAL ASPECTS AND IMPACTS (CLAUSE 6.1.2)	120
6.7	ENVIRONMENTAL ASPECT AND IMPACT ASSESSMENT METHODOLOGY (CLAUSE 6.1.2)	124
6.8	APPLYING THE ASPECT AND IMPACT METHODOLOGY (CLAUSE 6.1.2).....	132
6.9	ADDRESSING COMPLIANCE OBLIGATIONS (CLAUSE 6.1.3).....	135
6.10	PLANNING FOR SUCCESS (CLAUSE 6.1.4, 6.2.1 AND 6.2.2).	141
6.11	SUCCESS FACTORS	151
7.	BASIC FOUNDATIONS.....	153
7.1	MANAGING DOCUMENTS AND RECORDS (CLAUSE 7.5.1).....	153
7.2	PROVIDING RESOURCES FOR THE EMS (CLAUSE 7.1)	154
7.3	PROVIDING TRAINING (CLAUSE 7.2).....	156
7.4	MAKING YOUR PEOPLE AWARE OF WHY ENVIRONMENTAL MANAGEMENT IS IMPORTANT (CLAUSE 7.3).....	159
7.5	HOW TO COMMUNICATE AND WITH WHOM (CLAUSE 7.4.1, 7.4.2 AND 7.4.3)	160
7.6	SUCCESS FACTORS.....	163
8.	ENVIRONMENTAL OPERATIONAL CONTROLS AND PROCEDURES.....	165
8.1	PURPOSE OF ENVIRONMENTAL OPERATIONAL CONTROLS AND PROCEDURES (CLAUSE 8.1).....	165
8.2	WHAT DOCUMENTS DO I NEED? (CLAUSE 7.5.2)	166
8.3	WRITING DOCUMENTATION THAT WILL BE ACCEPTED BY THE EMPLOYEES (CLAUSE 7.5.2).....	169
8.4	MANAGING DOCUMENTS (CLAUSE 7.5.3).....	171
8.5	WHAT EMERGENCIES DO I NEED TO PLAN FOR? (CLAUSE 8.2).....	172
8.6	WHAT EMERGENCY PLANS SHOULD I HAVE IN PLACE? (CLAUSE 8.2)	177
8.7	TESTING EMERGENCY PLANS (CLAUSE 8.2).....	182
8.8	MANAGING OUTSOURCED SERVICES (CLAUSE 8.1).....	185
8.9	SUCCESS FACTORS.....	187

9. MANAGING TYPICAL ENVIRONMENTAL ASPECTS AND IMPACTS	189
9.1 WASTE.....	189
9.2 ENERGY USE.....	191
9.3 CHEMICALS USE	194
9.4 PLANT AND FACILITIES MAINTENANCE.....	197
9.5 AIR EMISSIONS	198
9.6 HISTORIC LAND CONTAMINATION AND ECOLOGY	200
9.7 WATER DISCHARGES.....	203
9.8 WATER USE	206
9.9 MATERIALS USE	207
9.10 TRANSPORT AND TRAVEL.....	210
9.11 PRODUCT USE AND DISPOSAL	212
9.12 MARKETING, ADVERTISING AND PACKAGING	213
10. MAKING SURE YOUR EMS IS WORKING AS EXPECTED	216
10.1 MONITORING, MEASUREMENT, ANALYSIS, AND EVALUATION (CLAUSE 9.1.1)	216
10.2 ROLE OF INSPECTIONS (CLAUSE 9.1.1 AND 9.1.2)	219
10.3 KEEPING COMPLIANT (CLAUSE 9.1.2)	221
10.4 INTERNAL AUDIT PART 1: PREPARATION (CLAUSE 9.2.1 AND 9.2.2)	224
10.5 INTERNAL AUDIT PART 2: CARRYING OUT A SUCCESSFUL AUDIT (CLAUSE 9.2.1 AND 9.2.2)	225
10.6 INTERNAL AUDIT PART 3: ROOT CAUSES AND MANAGING FINDINGS (CLAUSE 9.2.1, 9.2.2 AND 10.2).....	226
10.7 INTERNAL AUDIT PART 4: USING THE AUDIT FINDINGS (CLAUSE 9.2.1, 9.2.2 AND 10.2)	227
10.8 PRACTICAL USE OF NONCONFORMITIES AND CORRECTIVE ACTIONS (CLAUSE 10.2)	229
10.9 MANAGEMENT REVIEW THAT MAKES SENSE (CLAUSE 9.3).....	230
10.10 CONSTANT IMPROVEMENT OF THE EMS (CLAUSE 10.1 AND 10.2)	233
10.11 SUCCESS FACTORS	235

11. ENSURING YOUR COMPANY PASSES THE CERTIFICATION AUDIT.....	237
11.1 DO YOU REALLY NEED THE CERTIFICATE?	237
11.2 FINAL PREPARATIONS BEFORE THE CERTIFICATION	238
11.3 HOW TO CHOOSE A CERTIFICATION BODY	240
11.4 PREPARING FOR INTERVIEWS	243
11.5 WHAT QUESTIONS WILL THE ISO 14001 CERTIFICATION AUDITOR ASK?.....	245
11.6 HOW TO TALK TO THE AUDITORS TO BENEFIT FROM THE AUDIT	245
11.7 WHAT THE AUDITOR CAN AND CANNOT DO	247
11.8 IF YOU DISAGREE WITH YOUR AUDITOR.....	248
11.9 NONCONFORMITIES AND HOW TO RESOLVE THEM	249
11.10 SUCCESS FACTORS.....	251
12. INTEGRATION WITH OTHER MANAGEMENT SYSTEMS AND TECHNIQUES.....	253
12.1 WHAT CAN BE INTEGRATED?.....	253
12.2 WHAT CANNOT BE INTEGRATED?	256
12.3 PROS AND CONS OF INTEGRATION?	256
12.4 ISO 14001 VERSUS ISO 9001	257
12.5 ISO 14001 VERSUS ISO 45001	257
12.6 ISO 14001 VERSUS ISO 50001	258
12.7 ISO 14001 VERSUS ISO 55001	258
12.8 WORKING WITH OTHER MANAGEMENT TECHNIQUES.....	259
13. TRANSITION FROM ISO 14001:2004 TO ISO 14001:2015.....	262
13.1 TIMING OF THE TRANSITION	262
13.2 TWELVE-STEP TRANSITION PROCESS	262
APPENDIX A – CHECKLIST OF MANDATORY DOCUMENTATION REQUIRED BY ISO 14001:2015	268
APPENDIX B - ISO 14001:2015 IMPLEMENTATION DIAGRAM	277
APPENDIX C - ISO 14001:2015 VS. ISO 14001:2004 MATRIX.....	280
APPENDIX D – PROJECT PROPOSAL FOR ISO 14001:2014 IMPLEMENTATION TEMPLATE	290

APPENDIX E – PROJECT CHECKLIST FOR ISO 14001:2015 IMPLEMENTATION	297
APPENDIX F – PROJECT PLAN TEMPLATE FOR ISO 14001:2015 IMPLEMENTATION	302
APPENDIX G – LIST OF QUESTIONS TO ASK YOUR ISO 14001 CONSULTANT	311
APPENDIX H – LIST OF QUESTIONS TO ASK AN ISO 14001 CERTIFICATION BODY	314
BIBLIOGRAPHY	317
INDEX	319

LIST OF FIGURES

Figure 1: Number of ISO 14001 certificates issued in last 10 years (source: ISO Survey 2015).....	25
Figure 2: Example of environmental management organizational chart	31
Figure 3: Processes needed for regulatory and legislative requirements.	38
Figure 4: Processes needed to manage pollution incidents.	39
Figure 5: PDCA cycle and relationship with ISO 14001 clauses and the sequence of this book.	66
Figure 6: Estimated time taken to implement ISO 14001	72
Figure 7: Maximum timescales for certification	74
Figure 8: Example of a PESTLE analysis	86
Figure 9: Example Risk and Opportunities Register.....	116
Figure 10: Example of environmental aspects and impact identification using process flow method.	126
Figure 11: Example of environmental aspect and impact identification using checklist method.	128
Figure 12: Example significance rating using severity and likelihood scoring method.....	129

Figure 13: Example of significance rating using scored criteria method..... 130

Figure 14: Example of Compliance Obligation Register..... 139

Figure 15: Inputs into environmental objectives and planning 144

Figure 16: Example of Combined Action Tracking Register 151

Figure 17: "Source-Pathway-Receptor" model example 174

1. INTRODUCTION

This chapter introduces you to environmental management ideas, and the use of ISO 14001. It explains how you can use this book to help you implement an EMS in your business.

1.1 Why environmental management? Why ISO 14001?

For the last 20 to 30 years, environmental management within businesses has grown as a discipline. It is no longer just environmental pressure groups who care about the environment; it has become a mainstream political issue and a topic that most people have an opinion about.

Although climate change is the topic that springs to most people's minds when thinking about environmental issues, it's not the only issue. Others include loss of areas such as tropical rainforests and coral reefs, desertification (desert areas growing rapidly), lack of clean water, air pollution, use of limited natural resources, and pollution of water and land. In addition, there are local environmental issues that affect us every day, such as pollution from industry, waste, traffic, noise, dust, and other nuisances.

Billions of dollars' worth of research by universities and other institutes has expanded our knowledge of how people can impact the environment. We know so much more now than we did, say, 10 years ago. And, it seems like the more we understand, the more we have to worry about!

This research leads to generally accepted theories, which become mainstream knowledge in society, institutions, and pressure groups like Greenpeace. Pressure is then exerted on

governments to enact legislation or regulations to control or manage environmental impacts.

Businesses are therefore hit by both regulatory requirements from governments, and social pressures. These pressures are felt either directly through sales, or indirectly through shareholder requirements or other customer demands.

The reality is that for businesses to operate today, your personal views on whether climate change is happening or not are as irrelevant as whether you think businesses should pay taxes or not.

Environmental management is now a requirement for most businesses, whether you like it or not.

The good news is that in most cases, a good Environmental Management System will contribute to your business. Not just because it means you will win the contract with the customer who requires ISO 14001 certification, but also because good environmental management is about working smarter, wasting less, using less, and reducing costs.

ISO 14001 is an international standard that was developed not only to provide a standard against which different businesses can demonstrate their environmental credentials, but also to provide all types of businesses with a model and framework to follow to help them manage environmental issues.

The ISO 14001 standard provides a very useful and comprehensive guide on how to understand what environmental issues matter to your business, how to go about reducing the likelihood of being exposed to any possible environmental problems, and how to gain the most benefit to your business from environmental management. It will work together with other management systems, and while allowing you to focus on the important environmental issues.

The other benefits to your business come through what your own people think about working for you. There is evidence that businesses with a good environmental reputation will find it easier to recruit new staff, particularly younger staff. Many businesses have successfully used environmental issues to engage with staff in a way that they never could before with such uninspiring topics as quality or financial controls.

So, ISO 14001 and environmental management doesn't need to be just another bureaucratic pile of paperwork. It can be something that really helps the business, in both the short term and the long term. Done the right way, it can change a business' future for the better, and hopefully help the rest of our futures, too.

1.2 Basic environmental management principles

Environmental management is not too difficult to understand if you can get past all the jargon and terminology. The environment itself is often broken down into three "media":

- **Land** – the soil. Impacts include land contamination from chemicals.
- **Air** – the atmosphere. Impacts include CO₂ emissions, dust emissions, solvent emissions, etc.
- **Water** – rivers, groundwater and aquifers, lakes, streams, seas, oceans. Impacts include the use of water, and the pollution of water.

When we think about environmental impacts, we think about how these three media are affected by our business activities and processes.

These three media, in turn, support habitats. Habitats are the different types of places that plants and animals live, for example grasslands, rivers, forests, coral reefs, and rainforests. A habitat is also where people live: a house, street, or town.

When we think about environmental impacts, we also think about how these habitats are affected.

Later, in section 8.5, we will look at the model called “Source-Pathway-Receptor,” which describes three parts to how an environmental impact can occur. You don’t need to be able to understand the science behind how this happens to achieve good environmental management. You just need to be able to understand that impacts can occur whenever something is **taken** from the environment or **put into** the environment.

It’s important to remember that every business will have some sort of impact on the environment, even if it is just having the lights turned on, or electricity to power a laptop.

Applying environmental management to your business is not about comparing yourself to other industries and saying, “Look at how bad they are,” and being satisfied that there is nothing you need to do. The point of environmental management is to improve what you do and to reduce your environmental impacts, no matter how insignificant you think they might be compared to those of bigger industries.

There are two different types of environmental impacts that your business can have:

- **Direct** – your business activities directly cause the impact, for example the release of emissions from a chimney, spillage of chemicals into a river, etc.
- **Indirect** – it’s because of your business that the impacts occur, but you don’t do it yourself, for example CO₂

emissions from electricity generation. You use the electricity, but the electricity company releases the CO₂.

One key principle of good environmental management is to understand what you are responsible for. There are three levels of responsibility, and each require a different response:

- **Control** – this is where you or your business have direct control over what happens, and you can make decisions that will change what happens. For example, you can control what your staff do, or what your contractors do.
- **Influence** – this is where your business can exert some influence over what happens, and can try to make change happen somewhere else. For example, you can influence what your suppliers do, or what your customers do.
- **Prepare** – this is where your business has no control or influence at all, but would need to prepare for or respond to an incident to prevent it from causing an environmental impact. An example might be illegal dumping of waste on your site, where you have no control to prevent it from happening, but will need to deal with the consequences. Another example might be how you prepare to respond to changes in the climate, such as flooding.

It is more common for you to have **control** over your **direct impacts**, although you can have **control** over **indirect impacts** as well. In the example of using electricity, you can **control** your electricity use, although the impact is **indirect**.

Good environmental management principles say that you control what you can, influence what you can, and prepare for what you can't control or influence.

1.3 Purpose of ISO 14001

There is a section of the ISO 14001 standard that is not very often read. It's the "Introduction" section, and the reason it's not read very much is because it doesn't contain any requirements for the business. It has no clauses to follow or obligations to comply with.

It does, however, set out the aims of an Environmental Management System, and it's well worth looking at.

During my work with many different businesses I have found that a good way to explain the purpose of ISO 14001 is that it aims to ensure that your business:

- is not caught out by any legal requirement or anything else you said you would do
- benefits from reducing its impact on the environment (including short- and long-term financial benefits)
- reduces its risks due to poor environmental management

These are the three key aims of your Environmental Management System and, ultimately, of the ISO 14001 standard. All the other clauses of the standard are the mechanisms by which you achieve these three things.

However, ISO 14001 isn't a list of environmental standards that your business has to achieve. People often make the mistake of thinking that ISO 14001 isn't for them because they won't be able to do everything it requires. In reality, the standard does not mandate things like: "You must recycle all your waste," or "You must reduce your electricity use," or "You must not use hazardous chemicals." Instead, it's a framework that you can apply to any business, and use it to decide what you want to

improve, with a greater understanding of the benefits to your business.

The benefit of ISO 14001 is that it can be used by any business, as opposed to certificates like Eco-labels or standards like FSC, which only apply to certain businesses. It is also written in a way that you are in control of the scale and pace of the improvements you make. It sets out a very logical way to understand more about the business and environmental issues, covering a range of potential issues and helping you to determine the risks and opportunities. It's then up to the business to decide how it responds to these risks and opportunities.

The other great advantage to using ISO 14001 is that it is designed to integrate into other business processes. So, if you have a Quality Management System based on ISO 9001, there will be many common requirements. You don't need to develop one whole Environmental Management System separate from your Quality Management System; you can simply integrate many of the processes.

The final selling point of ISO 14001 is that it doesn't tell you so much what to do, but more what you should achieve. It leaves options open for you to decide the best solution to comply with the different clauses, depending on how they best fit into your business. For example, you should have a way to make sure people are competent. How you do this is up to you.

1.4 Who should read this book?

Now you have decided that ISO 14001 is right for your business, and you are ready to implement the standard; however, we just explained that the standard is a framework and you are free to

decide how to meet the different requirements. So, what does that look like?

This book was written for people who are new to environmental management, or new to implementing ISO 14001. You might have experience with the standard, but not necessarily with delivering an ISO 14001 project within a business. The book was written primarily for small and medium businesses, but you might also be part of a business, division, or department within a larger corporation. For those in corporations, you need to be aware of corporate tools or processes that you might need to follow, instead of – or in addition to – some of the solutions presented in this book.

The book was written for those of you who will take responsibility for driving the development of environmental management in your business. It aims to give you an explanation of what is typically required by the standard, taking technical terminology and “Standard Speak” and interpreting it into something understandable. With more than 25 years as an environmental manager and as a certification auditor, I can explain what to expect from your certification audits, and what you need to have in place not only to keep the auditor happy, but to benefit your business, as well.

This book can also be used if you are an auditor, especially an internal auditor, to understand more about what you should expect to find in a good EMS. It provides advice on how to conduct internal audits, but you can also refer to different sections to understand what the clauses of the standard really expect from the business.

If you are a CEO or CTO, this book is also a good way to understand what sort of commitment is required to implement ISO 14001. For many businesses, it is a CEO, Chairperson, Executive, or Non-Executive Director who first voices the idea of

ISO 14001 implementation. This book is an excellent way to understand how to turn that initial thought into reality in your business, including what it might cost and what benefits you will likely see in return.

This book is also useful to those who have more experience in environmental management, because the changes in the ISO 14001:2015 version are explained throughout this book. In addition to containing a section dedicated to understanding the changes, the book was written to reflect what the new standard requires and how to implement the changes.

Consultants will also find this book useful, because of its explanation of the changes to the ISO 14001:2015 standard, and because it not only explains what should happen, but it also provides ideas and techniques for how to make those things happen. This will help you guide your clients through some of the human issues they might encounter when trying to drive change, in addition to the technicalities.

Although the book guides you through the certification process, you can use this book whether you are planning certification or not. Maybe you just want to benefit from better environmental management, and from implementing a really good EMS.

1.5 How to read this book

Chapters 3 through 10 of this book were written to guide you through the implementation of an ISO 14001-based EMS. They are arranged in a logical sequence, based on the order in which it makes most sense to carry out different stages of your project. They were not written in the same way that the standard was written, but in the best way to implement an EMS in your business. You can use the sequence of the sections in this book to plan your EMS implementation project.

Each section takes you through the purpose, and looks at inputs, options, and decisions you need to make. These sections also include documentation that is helpful or essential to have in place. Sections provide information on what you will be expected to do, and other options about how you might go about implementing your EMS. Case studies are used to explain the options, or to highlight certain benefits.

Each chapter ends with a list of “Success Factors” describing the results that you can expect to achieve after you have finished implementing the changes described in each section. These are described as outcomes – i.e., what you should see happening if things are working well. You can use these as a measure of whether you think you are on track and can progress, or whether more work is needed.

Chapter 11 of the book helps guide you through the certification process, if you intend to go through certification. Chapter 12 looks at specific issues around integration with other standards, for those who operate with other standards, and Chapter 13 looks at how to transition from the old ISO 14001:2004 standard to the new 2015 version, for those with Environmental Management Systems already in place.

The appendices provide lots of additional information you will find useful for your EMS.

1.6 What this book is not

This book is not a ready-made environmental manual that you can take and use in your business. It also does not serve as a list of documents you need to write. This book goes through a logical process of implementing a good and effective EMS, and by working through it, you will achieve all the requirements of the ISO 14001 standard.

This book doesn't provide templates for every policy, procedure, or tool that you will need. It does tell you what documents you will need, how to go about developing them, how to involve others, and how best to go about implementing them. In some cases, there are suggestions and examples of what other businesses would typically have in place.

This book will not give you technical answers to environmental issues, such as what equipment to use or what software to buy. Chapter 9 does, however, cover the typical sort of environmental issues you might need to deal with, depending on your business, and the things you should be thinking about.

1.7 Additional resources

- [ISO 14001 online courses](#) – free online courses teaching you the basics of ISO 14001, how to implement the standard, how audits work, etc.
- [ISO 14001 downloads](#) – free documents including checklists, guidance, and white papers.
- [Conformio](#) – a cloud-based document management system (DMS) and project management tool focused on ISO standards.
- [ISO 14001 Documentation Toolkit](#) – a set of all the documentation templates that are required by ISO 14001, with expert support included for the implementation.
- [Official ISO webpage](#) – here you can purchase an official version of the ISO 14001 standard.

2. WHAT EXACTLY IS ISO 14001?

This chapter provides more details on the ISO 14001 standard, and explains what to expect from the certification process. It helps you decide how best to use the standard in your business.

2.1 The most popular environmental management standard worldwide

ISO 14001 is an international standard published by the International Organization for Standardization (ISO), and its official name is “ISO 14001:2015 Environmental Management Systems – Requirements with guidance for use.” Being an ISO standard means it had to go through a voting process – members of ISO are national standardization bodies, and for a standard to be published the majority of members have to vote for this standard. In effect, this means that most of the countries in the world have accepted this as the leading international standard.

ISO 14001:2015 is the third version of the standard. It was originally published in 1996, and then revised in 2004 before its current revision in 2015. The standard was developed by ISO TC 207, a committee made up of representatives from around the world. These are leading experts in this field – you could consider it to be a consensus of leading environmental management experts; therefore, this is not a lone product from just one author.

One of the features that differentiate this standard from other environmental management frameworks/standards is that an organization can become certified by an accredited Certification Body, and will therefore be able to prove its compliance with

this standard to its customers, partners, owners, and other stakeholders. Many companies have already gone through the certification process – here you can see the number of certificates issued in the last 10 years:



Figure 1: Number of ISO 14001 certificates issued in last 10 years
(source: ISO Survey 2015)

ISO 14001 is recognized worldwide as the most important and widely used Environmental Management System standard, becoming the equivalent to environmental management of what ISO 9001 is to quality management.



Free tool tip: This [ISO 14001 Foundations Course](#) will explain all the basics of the standard.

2.2 How does ISO 14001 work?

Those people who are new to the standard often believe that ISO 14001 is going to tell them all the things they have to do to save the environment. It's often seen as being either prescriptive and setting out in detail what the business will have to do, or as an open door to making changes that are going to be bad for the business. I've been in board meetings where people have banged on the desk and shouted that ISO 14001 certification will cost millions of dollars and ruin the business. In fact, ISO 14001 certification for one such company led to it winning one of its single biggest contracts.

There is often a misconception that the standard will force the business into making commercially damaging changes. There's an idea that the standard will prescribe to the business that they have to do certain things, like recycling, or using less electricity, or stopping the usage of some materials, or – I even heard once – donate money to Greenpeace.

In truth, ISO 14001:2015 does none of these things.

The standard leaves the decisions to the business. It was designed specifically to help businesses, and to contribute to their success. The best way I have heard it described was that "the decision to achieve ISO 14001 certification was a business decision based on enlightened self-interest."

But, how does an internationally recognized Environmental Management System standard work if it's up to the company to make the decisions? What can be "standard" about that? The answer is that the ISO 14001 standard, like other management system standards, is a framework of processes that businesses adopt and develop to suit their particular circumstances. It uses

the outcomes of these processes to help a business manage its risks and opportunities.

Why isn't it prescriptive? Wouldn't it be easier if it just told us what to do? Well, the standard is designed to be used by any organization in the world. So, it's not just for commercial businesses, but also government bodies, charities, even social clubs – everything from a nuclear power station to a sandwich shop. Imagine the range of different environmental issues there are across all the organizations that could use it? It would be vast. The standard would never work if it tried to be prescriptive to every possible situation.

So, the standard is a framework of processes that can be used by any type of organization, and out of these processes your business can understand what environmental issues are relevant, and then set the priorities and level of response, depending on how it wants to manage these risks and opportunities.

The key to understanding what ISO 14001 is, is to recognize that:

- Your business will have an impact on the environment.
- Depending on what your company does, it may have legal obligations.
- Depending on other commitments your business has made, it may have other obligations.
- There will be interested parties with a view of your organization's environmental issues who can affect your business.

Not managing any one of these things in the best possible way could pose a risk to the success of your business. Not making the most of potential opportunities by managing these elements could mean that you lose out. Either is bad for

business. The standard is designed to help you make sure this doesn't happen.

Environmental issues often exist because of bad decisions, either by management teams, managers, or individuals. This means everyone in the business needs to make the right decisions every time in order to prevent such issues. Therefore, the standard sets out all the mechanisms and processes to make sure environmental issues are managed properly throughout your organization, and not just by the Environmental Manager.

2.3 What ISO 14001 is not – The most common myths

There are many myths spoken about ISO 14001, which often become the main stumbling blocks that prevent businesses from seriously considering ISO 14001, let alone implementing it. The most frequent and common myths surrounding ISO 14001 are:

“The standard requires XYZ.” Often, people will use their knowledge of environmental issues, perhaps from outside the business or from other businesses, and tell you that the standard will require “all our waste to be recycled” or “you won't be able to put X down the drain anymore” or “we'll have to buy expensive energy-efficient lights.” This might be what happened elsewhere, but that doesn't mean you'll make the same decisions.

“The environmental team / facilities team / health and safety team can handle it.” It's a misconception that ISO 14001 only applies to one department or to one person in the business. Environmental management is affected by many parts of the business's operations, activities, and decisions. No single team is responsible for them all; therefore, no single team could ever

control them all. Implementation will involve different people from different departments working together, and from different levels of the organization.

“We can implement it in a few months.” Of course, anything is possible, given the right amount of effort and budget! However, most businesses find a balance, and will give themselves more time to plan and implement an ISO 14001 project. More time can be given to ensuring budgets are agreed, people are on board with the project, and any changes are planned and managed.

“The standard is all about documentation and bureaucracy.” Good environmental management is about you having control over what happens in your business. As with any management discipline, documentation forms part of how you manage the business, but it’s not the only way you manage things. Some documentation is mandated by ISO 14001, but it’s very limited. In truth, on the whole, the level of documentation and bureaucracy depends on how you want to implement the standard.

“We just need to have an Environmental Policy.” This is an important document required by ISO 14001, but not the only mandatory document you will need to have in place. Chapter 8 tells you more about what documents you must have in place.

“We only need to do this to get the certificate.” Getting the certificate is a factor you need to consider, for example, if it’s required by a big customer. But, why are you being asked to get the certificate? What is driving this need? What does it mean for your business? Using ISO 14001 will help you understand this. In most cases, getting the certification is far less important to the business than the benefits it will realize from implementing a good Environmental Management System.

“ISO 14001 will cost too much money.” We’ll look at costs more in Chapter 3; however, in most cases, deciding how much is spent on implementing ISO 14001 is mainly up to you. There are some costs that can’t be avoided, for example, the cost of external certification audits. But, decisions as to how much and how quickly money gets spent are left to the business to make. However, implementing the standard does mean that you can become a lot more aware of the benefits or costs of different decisions. It could be that with this new information, you may well end up making different decisions about spending than you would now.

“ISO 14001 doesn’t apply to a business like ours.” Wrong! The standard was written to be applicable to any business. Any business can benefit from using the standard, even if it doesn’t go through to getting certification. You don’t need to be a major industrial plant with smoking chimneys to use ISO 14001, or to benefit from it.

2.4 Where does environmental management belong?

There is no right or wrong answer to this. However, one of the most successful models suggests that environmental management belongs at the very top of the organization, with delegation through the line management of the organization. Line management is then supported by people with more technical knowledge. In the example on the next page, the Environmental Advisor provides support to the Managing Director (MD), and the Directors of other departments. Environmental management then remains a responsibility of each Director, delegated down to their managers and so on.

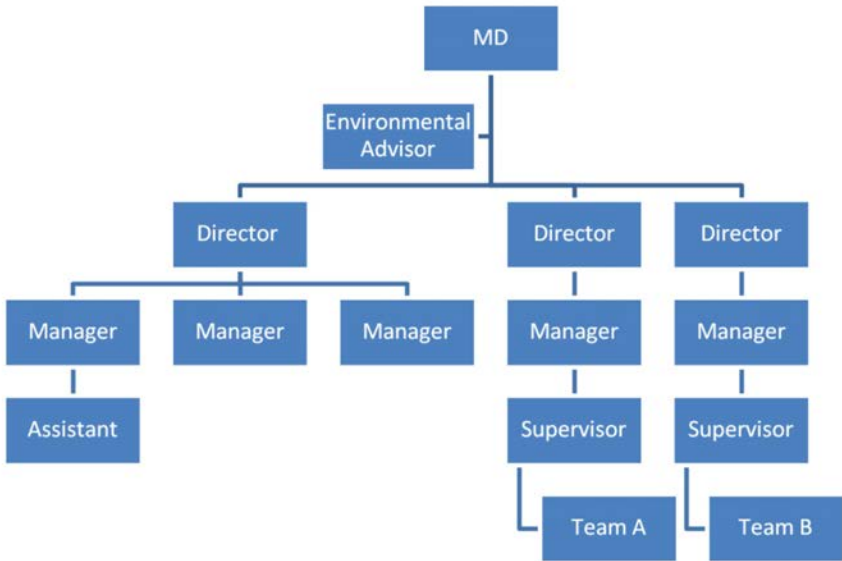


Figure 2: Example of environmental management organizational chart

The benefit of the model above is that it maintains responsibility with the people who are responsible for the different business activities.

One common mistake is for the business to nominate someone within the business, for example the existing Health and Safety Manager or Facilities Manager, to take responsibility for implementing ISO 14001. They often do not have the authority or decision-making powers to implement the changes needed. This will result in conflicts of interest and delays to implementation.

A more successful model is to assign different responsibilities to different people within the business, where they already have similar responsibilities. For example, if you have an HR department that is responsible for training needs analysis and competency processes, then environmental requirements could be built into it. Or, if you have a purchasing department, they

could be responsible for the environmental requirements of purchasing.

Advice for environmental management can come from someone within the business who has the right competencies, or from an outside source, such as a consultant. Ideally, they will work alongside managers and others with responsibilities and help them understand what they need to put in place. Often, however, specialists or consultants may be tempted to take too much control and responsibility, and try to fix it all themselves to make it “easier” for other managers. This might be treated as a positive in the short term, but in the longer term it makes it more difficult to maintain the management system when that support is taken away. One way to tackle this is to choose a consultant who works to develop the competency and understanding within the business, to make sure that they can step away at some stage, without everything coming to a stop.

2.5 For which type and size of company is ISO 14001 intended?

As mentioned above, ISO 14001 is intended for every type of organization, not just businesses. It’s also intended for all sizes of organizations. There are all sorts of organizations that use ISO 14001, from hotels to government departments, airports, schools, shoemakers, industrial factories, and power stations.

The most common industries achieving ISO 14001 certification in 2015 were, in order: construction, basic metal and fabricated metal products, electrical and optical equipment, wholesale and retail trade, and repairs of motor vehicles, machinery, and equipment.

The geographical spread of ISO 14001 covers the globe. There are 175 countries that have at least one site with ISO 14001

certification. Of these, the largest number of ISO 14001 sites is in China, followed by Japan, and then the UK. Regionally, the largest number of ISO 14001-certified sites can be found in East Asia and Pacific, followed by Europe, then Central and South America, North America, Central and South Asia, and the Middle East and Africa.

2.6 Short history of ISO 14001

Environmental management, as a discipline, has been around for hundreds of years, from farming through to controls over smoke. The first concepts of Environmental Management Systems for industries were developed in the mid-19th century, after it was seen that industries could not only damage the environment, but also the people who rely on that environment. In 1987, a report by the United Nations identified the need for environmental management more globally. This was followed by a meeting of governments in Rio de Janeiro known as the Earth Summit in 1992. Government commitments to environmental protection were starting to become a mainstream political agenda.

In 1992, the British Standards Institute published BS7750, a standard for Environmental Management Systems. In 1993, the International Organization for Standardization (ISO) established TC 207, a new technical committee to develop an international EMS standard. The first ISO 14001 standard was issued in 1996, using some ideas from BS7750.

The standard was revised in 2004, with relatively minor changes to text and structure. In 2015, the standard was revised again with more substantial changes. These changes were driven by the International Organization for Standardization's decision to create a standard format for all management system standards (e.g., Quality, Information Security, etc.). This resulted in Annex

SL, which defined a High-Level Structure (HLS) – a 10-point framework that ISO management system standards should be developed against. This was in response to a business request to make management systems easier to connect together. Sharing a common framework means different management systems can be integrated more easily. (You can see a detailed explanation of the differences between the 2004 and 2015 revisions of the standard in Appendix C.)

ISO 14001 is one of a suite of standards and guidance documents that make up the ISO 14000 series. Others include:

- guidance related to ISO 14001 – the ISO 14004 guidance document
- ISO 14031 – Environmental performance evaluation
- the ISO 14020 series (ISO 14020 to ISO14025) covering Eco-labeling
- the ISO 14040 series (ISO 14040 to ISO 14049) covering Life Cycle Assessment

2.7 The structure and main clauses of the standard

The ISO 14001 document contains a Forward, Introduction, and then 10 chapters. These are followed by Annex A - Guidance, and Annex B - Comparison with ISO 14001:2004. Finally, there is a Bibliography and an Index of Terms.

The mandatory clauses of the standard are in chapters 4 through 10. However, it is well worth reading the Introduction to better understand the purpose of the standard.

Chapters 1 to 10 follow the High-Level Structure (HLS) mentioned above. These are:

1. Scope – explains that this standard is applicable to any type of organization.
2. Normative references – refers to ISO 14001 as a standard where terms and definitions are given.
3. Terms and definitions – provides explanations of terms and definitions used in the standard.
4. Context of the organization – part of the Plan phase in the PDCA cycle, defines requirements for understanding internal and external issues, interested parties and their requirements, and defining the EMS scope.
5. Leadership – part of the Plan phase in the PDCA cycle, defines top management responsibilities, setting the roles and responsibilities, and contents of the top-level Environmental Policy.
6. Planning – part of the Plan phase in the PDCA cycle, defines requirements for assessing risks and opportunities, compliance obligations, environmental aspects and impacts, setting environmental objectives, and developing plans.
7. Support – part of the Plan phase in the PDCA cycle, defines requirements for availability of resources, competences, awareness, communication, and control of documents and records.
8. Operation – part of the Do phase in the PDCA cycle, defines the implementation of operational controls,

lifecycle thinking, procurement, and outsourced services. This section also covers emergency plans.

9. Performance evaluation – part of the Check phase in the PDCA cycle, defines requirements for monitoring, measurement, analysis, evaluation, internal audit, and management review.
10. Improvement – part of the Act phase in the PDCA cycle, defines requirements for nonconformities, corrections, corrective actions, and continual improvement.

Looking at these 10 different chapters, you can see that making environmental management work in your business is not just a matter of putting in place some environmental schemes or projects. It takes a more comprehensive view of the business, understanding what the environmental issues, regulations, risks and opportunities are, and then getting various parts of the business to manage environmental issues in the right way. It will take coordination and the cooperation of your colleagues, as well as the support of your senior management.

2.8 Introduction to the Environmental Management System

Before we progress further, let's think about where environmental management came from and what its purpose is. Environmental issues originate from science and from research that tell us about the impacts that humans can have on the environment, from climate change to oil pollution, and from mercury poisoning in polar bears to burning down rainforests. As we understand more, governments and society expect a response. That response comes through regulations and laws designed either to penalize businesses when they cause a

problem, or to persuade them financially to operate in a particular way. Society influences businesses, for example as consumers, shareholders, lobbyists, etc. Equally, a business is made up of people, all of whom can, to a greater or lesser degree, influence what happens in that business. These pressures, legislation, regulations, expectations, and influences all pose risks and opportunities to your business. Changes in the environment because of climate change, loss of natural resources, and other impacts can also pose a risk to your business.

Certification of an ISO 14001 Environmental Management System is a statement that your business is capable of managing all these issues responsibly and appropriately. It sets you apart from the business next door that doesn't have ISO 14001 certification. Certification is an assurance to anyone interested that your business is managing environmental issues.

The standard tells us that the aims of implementing an ISO 14001 management system are that your business:

1. manages its obligations, both legal and any other commitments it has made,
2. reduces its impact on the environment, and
3. improves its environmental performance.

If we look at the first of these three aims, the standard sets out that the business should consider different obligations, both legal and other commitments, covering:

- regulatory / legislative requirements
- other requirements the organization has to meet
- other requirements the organization has chosen to meet
- needs and expectation of interested parties

Taking just regulatory / legislative requirements as an example, we can create a list of the different processes that the standard requires, to help us meet this aim. A similar list could be drawn up for each of the three other headings.



Figure 3: Processes needed for regulatory and legislative requirements.

We can do the same with the second aim of our management system, reducing the impact on the environment. There are five subheadings of issues we need to consider. If we take the subheading of pollution incidents, the standard requires a list of processes that should be in place to help us manage pollution incidents, shown in figure 4.

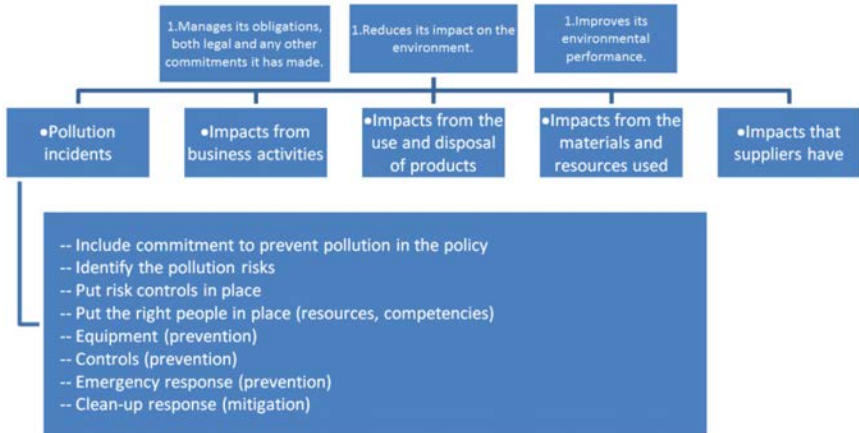


Figure 4: Processes needed to manage pollution incidents.

For the last of the three aims, improving environmental performance, this applies to:

- Setting and meeting objectives
- Delivering actions
- Monitoring performance
- Taking actions to ensure performance objectives are met
- Checks on performance (inspections, data)
- Confirming compliance with obligations
- Auditing the system
- Looking for continuous improvement

The purpose of looking at the standard in this way, is that as we look at the different processes that the standard requires, we can see that they are there to serve the purpose of achieving the three main aims.

As a result, the business will achieve various benefits, like reducing risks of breaking the law, not getting caught out on a commitment it's made, not wasting resources, improving the competency of its people, reducing costs, etc.

As we work through the remaining sections of this book, we will look at how to go about putting these processes in place. We will look at the technical requirements, but also at how to successfully engage others into the changes you want to make. We'll look next at some of these human factors that we want to get right from the start.

In this book we talk about the Environmental Management System (EMS), and generally you will hear people talk about it, as if it is a living and breathing entity. However, it is worth understanding that this is just a short way of saying: "all the work we do as a business to better manage our environmental issues." In truth, the EMS is not one single, tangible thing; rather, it is the huge variety of decisions, efforts, processes, tools, and people that make up the "system to manage the environment."

2.9 ISO 14001 certification process

If you are familiar with the certification process for other standards, you will already know how ISO 14001 certification works, as it is the same for all standards.

Before you start, you should decide whether to ask your Certification Body to undertake an optional gap analysis. This is described in more detail in section 4.3.

The first official stage of the certification audit is to agree on the scope with the Certification Body, and share certain information with them, such as headcount, operations of the business,

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APPENDIX A – CHECKLIST OF MANDATORY DOCUMENTATION REQUIRED BY ISO 14001:2015

1. Which documents and records are required?

The list below shows the minimum set of documents and records required by the ISO 14001:2015 revision:

Mandatory Documents	ISO 14001:2015 Clause
Scope of the Environmental Management System	4.3
Environmental Policy	5.2
Procedure for Identification and Evaluation of Environmental Aspects (including criteria for determining the significance)	6.1.2
Environmental Objectives and plans for achieving them	6.2.1
Operational Control Procedures	8.1
Procedure for Emergency Preparedness and Response	8.2

Mandatory Records	ISO 14001:2015 Clause
Risks and opportunities that need to be addressed	6.1.1

Compliance obligations record	6.1.3, 9.1.2
Competence records	7.2
Evidence of Communication	7.4
Monitoring Performance Information	9.1.1
Calibration Records for Monitoring & Measurement Equipment	9.1.1
Internal Audit Program and Results	9.2.2
Management Review Results	9.3
Nonconformities and Corrective Action	10.2

These are the documents and records that are required to be maintained for the ISO 14001 environmental management system, but you should also maintain any other records that you have identified as necessary to ensure your management system can function, be maintained, and improve over time.

2. Commonly used non-mandatory documents

Other documents that are very often used are the following:

Non-Mandatory Procedures	ISO 14001 Clause
Determining Context of the Organization and Interested Parties	4.1, 4.2
Competence, Training and Awareness Procedure	7.2, 7.3
Evidence on EMS Communication	7.4
Procedure for Control of Documents and Records	7.5

Procedure for Monitoring & Measurement	4.5.1
Procedure for Evaluation of Compliance (Legal & Other Requirements)	9.1.2
Procedure for Internal Audit	9.2
Procedure for Nonconformity and Corrective Action	10.2

While ISO 14001 does not require that you document all of the procedures, there are several processes that are mandatory to have in place in order to create the required records that are outlined in the first section. Remember these processes and procedures are not required to be documented; however, many companies choose to do so. One rule of thumb when deciding if you want to document a process is this: if your organization needs a written document to ensure consistency between employees, then you should document it. In many cases this is the best way to ensure that your environmental management system is reliably implemented.

3. How to structure documents and records

Determining Context of the Organization and Interested Parties

This is a new requirement of the standard and it is a good idea to document the process of determining the context and identifying interested parties and their expectation since it is done for the first time. This document should include all internal and external issues to be considered as well as the process and responsibilities for identification of interested parties and their needs and expectations. Procedure for Determining Context of the Organization and Interested Parties can be of great help in implementation of these new requirements.

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INDEX

- 5S, 256
- accreditation, 40, 41, 182, 310
- Accreditation Body, 41, 42, 238, 246
- activities, 56, 73, 86, 87, 89, 93, 102, 114, 118, 119, 122, 124, 130
- ANAB, 310
- Annex A, 31, 285
- Annex B, 31, 285
- asset, 252
- awareness, 32, 73, 266, 270, 281, 295
- bank, 59, 84
- benefit, 68, 91, 100, 109, 111, 114, 118, 128, 155, 165, 253, 256, 291
- British Standards Institute, 30
- BSI, 41
- budget, 72, 97, 138, 142, 152, 190, 191
- Budget, 47
- Bureau Veritas, 41
- Business Process Management (BPM), 257
- business strategy, 46, 49, 229, 261
- CEO, 17, 44, 65, 94, 95
- certificate, 22, 26, 39, 40, 70
- certification audit, 98, 121, 128, 138, 151, 180, 234, 236, 237, 249
- Certification audit, 73
- certification auditor, 74, 77, 82, 85, 128, 158, 180, 219, 235, 242
- certification body, 21, 37, 41, 295, 310, 312
- Certification Body, 238
- client, 59, 84, 207, 209, 211, 235
- communication, 252, 254, 257, 258
- competence, 270, 302
- Competence, 281
- compliance, 74, 85, 87, 89, 104, 135, 138, 143, 145, 152, 153, 196, 201, 202, 218
- Compliance, 135
- compliance obligation, 103
- compliance obligations, 94, 96, 102, 106, 111, 127, 130, 132, 135, 137, 140, 141, 152, 158, 164, 165, 167, 184, 203, 214
- consequences, 14, 104, 105, 127, 244, 249
- Consequences, 113
- consultant, 5, 29, 56, 57, 58, 59, 60, 64, 66, 67, 72, 75, 78, 118, 120, 128, 130, 189, 221, 237, 307, 308, 318
- consultants, 29, 58, 59, 60, 76, 118, 130, 134, 244, 293, 307, 308, 309

- consulting, 59, 291
- continual improvement, 261, 279, 289, 296
- Continual Improvement, 290
- controls, 30, 77, 95, 109, 113, 185, 188, 193, 196, 295
- corrective action, 247
- corrective actions, 33, 226, 272, 284, 290
- cost, 105, 152, 190, 206, 211, 237, 256
- cost benefit analysis, 152
- cost reduction, 47
- cost-cutting, 49
- costs, 37, 59, 60, 68, 71, 72, 73, 78, 104, 113, 188, 198, 204, 311
- CTO, 17
- customer, 11, 14, 26, 45, 59, 96, 132, 134, 137, 142, 311
- customer satisfaction, 49
- DNV, 41
- documentation strategy, 77
- EMS, 18, 32, 43, 56, 63, 68, 74, 78, 82, 87, 92, 94, 132, 144, 150, 160, 213, 215, 223, 226, 228, 230, 234, 237, 241, 245, 257, 259, 263, 268, 279, 302
- EMS scope, 80, 86, 294
- EU legislation, 48
- finance department, 182
- Foundations Course, 22
- Gantt chart, 66, 74
- implementation, 18, 20, 28, 38, 56, 57, 63, 184, 226, 232, 267, 289, 295, 305, 307
- implementation project, 48, 234, 301, 309
- improvement, 67, 88, 94, 256, 257, 263, 269, 272, 291, 312
- Improvement, 284, 311
- integrated audit, 311
- integrated management review, 229
- integrated processes, 253
- integrated system, 311
- interested parties, 24, 32, 34, 72, 73, 81, 84, 85, 86, 93, 94, 96, 140, 260
- internal and external issues, 267, 268
- internal audit, 17, 33, 162, 221, 223, 236, 247, 263, 296, 307
- Internal audit, 272, 283, 292
- Internal Audit, 290
- Internal Audit Program, 165, 266, 283
- internal auditor, 17, 152, 223
- Internal Auditor Course, 223
- International Organization for Standardization, 30, 40
- International Standardization Organization, 21
- interviews, 42, 239, 240, 245, 249
- investment, 59, 68, 73, 104, 156, 188, 189
- ISO, 223, 250, 253
- ISO 14000, 31, 116
- ISO 14001, 11, 15, 18, 23, 37, 42, 44, 53, 56, 97, 99, 115,

- 182, 222, 253, 254, 255, 264
- ISO 17021, 42, 238, 247
- ISO 45001, 254
- ISO 50001, 188, 252, 255
- ISO 55001, 255
- ISO 9001, 16, 22, 67, 107, 229, 252, 254
- IT department, 145
- Kaizan, 256
- large companies, 307
- Lead Auditor Course, 59
- Lean management, 257
- legal and regulatory requirements, 133
- legal requirements, 135, 136, 140, 165
- legislation, 11, 34, 136, 166, 226, 237, 242, 289
- management review, 227, 229, 230, 247, 255
- management review meetings, 232
- manufacturing, 87, 116, 119, 124, 256, 257
- market share, 46, 49
- measurement, 33, 148, 165, 215
- measurements, 152
- monitoring, 33, 36, 63, 73, 148, 152, 159, 194, 201, 202, 209, 214, 220
- myths, 25
- nonconformities, 33, 154, 165
- nonconformity actions, 227
- Operational Control Procedures, 164, 265
- operational controls, 32, 38, 62, 73, 164, 196, 202, 204, 292
- Operational controls, 162
- PDCA cycle, 32, 33, 63, 64
- Plan-Do-Check-Act (PDCA) cycle, 63
- Procedure for Emergency Preparedness and Response, 164, 265
- Procedure for Identification and Evaluation of Environmental Aspects, 164, 265
- procedures for waste disposal, 144
- project manager, 55, 64, 66, 72, 293, 304
- Project Plan, 64, 301
- project team, 65, 301, 305
- QMS, 43
- Quality department, 144
- quality management, 22
- quality management system, 16
- Quality Management System, 250
- recertification audit, 39, 259
- regulations and laws, 33, 132
- SGS, 41
- Six Sigma, 257
- SMART, 143
- Stage 1 audit, 38, 70
- Stage 2 audit, 70
- stakeholders, 80, 82, 84, 262
- strategy, 50
- surveillance audits, 39, 239, 259

surveillance visit, 239, 312
threats, 280
top management, 32, 44, 45,
49, 50, 53, 54, 64, 72, 86,
88, 89, 95, 98, 109, 139,
156, 241, 301
training, 28, 59, 66, 98, 168,
253, 270, 281, 308, 312
workshop, 95, 131, 157

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