

The Integrated Architecture Framework Explained

Jack van 't Wout • Maarten Waage •
Herman Hartman • Max Stahlecker •
Aaldert Hofman

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Why, What, How

 Springer

Jack van 't Wout
Capgemini Nederland BV
Papendorpseweg 100
3528 BJ Utrecht
Netherlands
jack.vant.wout@capgemini.com

Maarten Waage
Capgemini Nederland BV
Papendorpseweg 100
3528 BJ Utrecht
Netherlands
maarten.waage@capgemini.com

Herman Hartman
Capgemini Nederland BV
Papendorpseweg 100
3528 BJ Utrecht
Netherlands
herman.hartman@capgemini.com

Max Stahlecker
Capgemini Nederland BV
Papendorpseweg 100
3528 BJ Utrecht
Netherlands
max.stahlecker@capgemini.com

Aaldert Hofman
Capgemini Nederland BV
Papendorpseweg 100
3528 BJ Utrecht
Netherlands
aaldert.hofman@capgemini.com

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Foreword

When I joined Capgemini back in 1996 I was amazed by investment that had been made in developing Enterprise Architecture, and at the root of this, the IAF methodology. Back in the mid 1990s the importance of architecture was dimly recognised but certainly it was not widely understood as a crucial element of successful enterprise wide IT implementation. A decade later with the huge growth in the role, the sophistication, and importance of Information Technology it has become recognized, and established for the value it brings.

With this recognition has come various forms of ‘standardization’ ranging from the work of the Open Group and its moves to establish TOGAF as a common framework, together with ITAC to certify architects, through to a wide variety of product vendor architects, even to some industry sectors establishing their own architectures. Has this diminished, or even may be removed the need for IAF?

Well it might have done if the world had stood still, but it hasn’t. Simultaneously the range and complexity of technology has increased, the functionality has been extended to embrace new front office capabilities and most of all the externalization and globalization of business has added a whole new extra dimension. Standardization might have improved connections and interfaces, and in so doing produced ‘systems’ of apparently limitless extendibility, but it has done little to improve the necessary ‘understanding’.

So here we are 13 years later, 13 years of consistent development of IAF, and yet looking ahead the requirement for even more development is clear. But looking back it’s equally clear to see the value delivered and the foundation it has built in Enterprises in so many countries. The future will rest of the past, the legacy of IAF is one of enabling for the future and there are not many areas of technology where that remark can truthfully be made.

This book records an impressive journey, and points to an important future, and is written by those for whom Enterprise Architecture and IAF is a passion. Reading the book will help develop that same passion, as well as

increasing the understanding of one of the most important aspects of any enterprises success in business today. I thank my colleagues for introducing the topic to me, and for helping me to appreciate its value to my everyday work.

Woking, UK

Andy Mulholland

Preface

IAF Is Here to Stay!

IAF is here to stay! Even though I am very much in favor of open standards such as TOGAF and ArchiMate, I still say IAF is here to stay! No; the authors didn't pay me off to say this, although I wouldn't say no to a nice bottle of wine. However, I make this statement out of my own conviction. I'll explain why in a moment, but let's first start with some history.

When I got involved in the field of architecture in 1997, Capgemini was already working toward the creation of the Integrated Architecture Framework (IAF). Since then, the IAF has been evolving continuously. Fueled by daily experiences, discussions among architects, ample feedback from client engagements, the original framework has evolved into its current version.

In the past, Capgemini has been rather shy in communicating about the IAF. Rather than showing this diamond in the making to the outside world, they kept it quiet and continued polishing it. In my own past as a full-time Professor at the University of Nijmegen, I was involved in several architecture related research activities, such as the ArchiMate project. When I became aware of IAF's existence, I immediately challenged Capgemini to more widely publish their IAF. Meanwhile my curiosity was mounting. To me, IAF provided a welcome, practice based, complementary view to the results of the ArchiMate research project. So, when I joined Capgemini at the start of 2008, I was more than happy to attend a course on IAF. This strengthened my conviction that it was time for Capgemini to finally produce a book on IAF. There was more than enough reason to be proud about IAF as a tried and tested architecture framework, and make it available to a wider audience. Therefore, early 2008 I started a lobby to produce an IAF book, and late 2008 we were finally able to give the go ahead to the team of authors to do the really hard work and produce the book. I am really grateful to the author team for their commitment in finishing this book. It shall be no secret that 2009 has been a difficult year for our industry. Despite commercial pressures, the authors spent numerous hours in their spare-time to continue working on this great book on architecture.

So how about open standards? Large parts of TOGAF 9's content framework have already been based on IAF. Currently, The Open Group has two complementary standards for architecture: TOGAF, the method for doing architecture, and ArchiMate, the language for representing architectures. So is there a future for IAF amidst all of these standards? Well, in my opinion there certainly is. Standards evolve based on consensus. As a result, standards can only (and must) evolve slowly. At the same time, consultancy firms such as Capgemini will continue to gather their own experiences. This is where company specific frameworks such as the IAF can play a crucial role. They will allow for faster innovations, leading the direction in which future versions of the standards can evolve.

Therefore, I expect IAF in its next evolution step to become fully compliant to the TOGAF/ArchiMate tandem, while at the same time going beyond these standards based on the fast amount of – ever growing – experience embodied in the IAF. In the first decennium of this century the 'I' in IAF stood for integrated to signify the need to integrate different views and aspects when developing an architecture. In the next decennium I expect this first 'I' to stand for innovating, to signify the fact that the Innovating Architecture Framework will lead the way for future versions of the open standards. Therefore, I can say with conviction: IAF is here to stay!

I sincerely hope you enjoy reading this book, as much as I have enjoyed seeing the authors write it!

Nijmegen, Netherlands

Prof. Dr. H.A. (Erik) Proper

Preface

This book captures and communicates the wealth of architecture experience Capgemini has gathered in developing, deploying, and using IAF since its documentation in 1993. It intends to guide the reader through the corners and crevasses of IAF. We aim to help the reader understand why we have done the things we did to develop IAF specifically, and the IT architecture profession in the IT industry more in general. We hope we have achieved our objectives and readers are welcome to provide us with feedback. This is because we are sure we are not there yet. The architecture profession in the IT industry still needs a significant amount of time to mature. Just imagine how long it took architects in the building industry to come to the point where they are now.

Utrecht, The Netherlands

Jack van 't Wout
Aaldert Hofman
Max Stahlecker
Herman Hartman
Maarten Waage

Objectives of the Book

This book has two main objectives. The first is to explain the background and mindset behind IAF. As IAF usage becomes more widespread over the globe, more and more people need to understand its background and mindset to fully benefit from it. The second objective is to capture the body of knowledge we have been assembling since 1993. It is not uncommon to see the same question pop up on newsgroups and forums several times throughout the years. This book not only intends to provide answers to the most common ones, but should also provide answers to all those questions regarding IAF you have had through time, but never dared to ask.

Intended Readers

We have written this book with the following readers in mind:

(Potential) Architects who want to thoroughly understand IAF so they can use it in their environment. This does not mean that one can read this book and benefit fully from IAF without additional training. Architecture is a trade one has to learn together with colleagues, in real life.

Others who want to understand architects that use IAF. IAF architects have one thing in common. They apply IAF in their work. This means they use specific terminology, especially amongst themselves. People who want to know more about IAF's terminology and mindset are also invited to read at least a few parts of this book (e.g. [Chap. 2](#) or [Chap. 4](#)).

Engineers who work with IAF deliverables. Engineers are working together with architects to create effective solutions that meet certain business objectives. Thus they might be interested in getting a better understanding of the thinking behind these IAF deliverables. We recommend taking a look at the physical artifacts & views (covered in [Chap. 3](#)) and IAF's interplay with solution development (covered in [Chap. 4](#)).

Participants of the Capgemini's Architecture Learning Program. Together with the training experience and this book, architects should not only be able to get up to speed even quicker but also better prepared than in the past. They will have a document that they can fall back on when they enter an area of IAF they have not been in a while. Especially [Chap. 3](#) helps to get a better understanding of IAF's artifacts and views.

Experienced IAF architects. Of course experience IAF architects interested in learning more about the history of IAF or in specific IAF artifacts and their usage are invited to use the book as an extended glossary.

Structure of the Book

Throughout this book ‘we’ stands for ‘we, as IAF architects’ and thus might not be limited to just the authors – we hope we captured the thoughts and opinions of many people who use IAF in their daily work. That’s why the book was extensively reviewed with a focus on those ideas that make IAF what it is now.

Chapter 1: *IAF background, value and strategy* explains why IAF was initially developed, what it has delivered, its added value, and how Capgemini intends to go on with the framework.

Chapter 2: *IAF’s architecture* provides insight into the mindset and mechanisms that are part of IAF.

Chapter 3: IAF’s *aspect areas explained* gives an overview of the most common architecture artifacts and views of IAF and shows what the content of the main elements of the framework are.

Chapter 4: *IAF in perspective with other frameworks and methods* elaborates on the different ways IAF can be used in projects, in combination with other tools, methods and frameworks.

Chapter 5: *Applying IAF and using its outcomes* shows the best ways IAF can be used to professionalize the architecture function in an organization.

Chapter 6: *Real life case studies* exemplifies the use of IAF through the description of a number of real life case studies.

Chapter 7: *The making of IAF* explains the history of IAF.

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IAF would not have existed without the ongoing support of the *Capgemini University*. Through the years they have been sponsor for the development of IAF and the deployment material related to IAF. They have enabled internal business models that provided the architecture community with the means to develop their trade through the IAF. Key players from the university have been Stephen Smith and Régis Chassé.

Another group of people in Capgemini that have sponsored IAF through time is *Global delivery*. Especially Mark Standeven and Bart Groenewoud have helped us come to where we are today, by sponsoring IAF and the architecture community.

Of course we also need to acknowledge all of our colleagues that have helped develop IAF since 1993. We apologize up-front for the names we have

forgotten. No offence is intended, it just is a fact that so many people have shared their experience through time. With this proviso, key contributors include:

- *From the USA:* Doug Houseman, Anne Lapkin, Meir Shargal, Hervé Bertacchi, Leigh McMullen, Mike Cantor, Bob Reinhold, Aaron Rorstrom and others;
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