

**TOWARDS A FRAMEWORK FOR MANAGING
ENTERPRISE ARCHITECTURE ACCEPTANCE**

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2014

DECLARATION

I, **Sonja Gilliland** declare that **Towards a Framework for managing Enterprise Architecture Acceptance** is my own work and that all the sources I have used or quoted have been indicated and acknowledged by means of complete references.

Signature: _____

Date: _____

DEDICATION

To David

ACKNOWLEDGEMENTS

Soli Deo Gloria

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ABSTRACT

An enterprise is a complex and changing entity, which is managed and maintained by humans. Enterprise architecture has been identified as an organisational strategy designed to assist enterprises with the understanding of complexity and the management of change. Acceptance, implementation and maintenance of enterprise architecture in organisations are complex and time-consuming. Work roles, responsibilities, common vocabulary, and buy-in are some of the cooperative human factors of stakeholders and participants and are believed to have an effect on the process of enterprise architecture acceptance in organisations. This study focused on *identifying human factors affecting enterprise architecture acceptance* and the question of *how knowledge of these human factors can be used to assist organisations in the management of enterprise architecture acceptance*.

The research addressed two main research objectives: the development of a work-level-related model for enterprise architecture acceptance and a proposed method for assisting organisations with enterprise architecture acceptance. An initial set of human factors affecting enterprise architecture acceptance were identified through an exploratory study in one organisation. A study of existing literature was used to identify other human factors affecting enterprise architecture acceptance and to compile a more comprehensive list of human factors. The resulting comprehensive list of human factors was categorised into six constructed work-level-related human concerns and confirmed in more organisations. A work-level-related model for enterprise architecture acceptance was established based on the work-level-related human concerns and associated human factors. A method for organisational use and management of enterprise architecture acceptance based on the model was proposed.

The result of the research is the Work-level acceptance framework for enterprise architecture (WoLAF for EA), which could contribute to understanding and managing the important aspect of human acceptance of enterprise architecture in organisations.

Key words: Enterprise architecture, enterprise architecture acceptance, human factors, work levels in organisations and enterprise architecture acceptance, framework for enterprise architecture acceptance.

OPSOMMING

'n Onderneming is 'n komplekse en veranderende entiteit wat deur mense bestuur en instand gehou word. Ondernemingsargitektuur is 'n geïdentifiseerde strategie wat ondernemings kan ondersteun met die verstaan van kompleksiteit en veranderingsbestuur. Aanvaarding, implementering en instandhouding van ondernemingsargitektuur in organisasies is grootskaalse en langdurende prosesse. Werksrolle, verantwoordelikhede, algemene woordeskat en in-koop is sommige van die menslike faktore van insethouders en deelnemers wat 'n moontlike uitwerking het op die ondernemingsargitektuur aanvaardingsproses in organisasies. Die fokus van hierdie studie is om *menslike faktore wat inwerk op die aanvaarding van ondernemingsargitektuur in organisasies te identifiseer* en om die vraag te beantwoord van *hoe kennis van hierdie menslike faktore gebruik kan word om die aanvaarding van ondernemingsargitektuur in organisasies te bestuur*.

Die navorsing het twee hoofdoelwitte aangespreek: die ontwikkeling van 'n werksvlak-verwante model vir ondernemingsargitektuur aanvaarding en 'n voorgestelde metode om ondernemings te ondersteun in die bestuur van ondernemingsargitektuur aanvaarding. Menslike faktore wat ondernemingsargitektuur aanvaarding beïnvloed is deur middel van 'n ondersoekstudie in een organisasie bepaal. In 'n literatuurstudie is ondernemingsargitektuur-verwante menslike faktore wat aanvaarding beïnvloed geïdentifiseer met die doel om 'n meer volledige lys van menslike faktore saam te stel. Die saamgestelde, uitgebreide lys van menslike faktore is daarna in ses geïdentifiseerde, gekonstrueerde, werksverwante menslike kwessies ingedeel. 'n Werksvlak-verwante model vir ondernemingsargitektuur aanvaarding gebaseer op die werksvlak-verwante menslike kwessies en verwante menslike faktore, is saamgestel. 'n Werksvlak-verwante metode vir gebruik in organisasies en vir die bestuur van ondernemingsargitektuur aanvaarding word voorgestel.

Die navorsingsuitset is 'n raamwerk genaamd "Work-Level Acceptance Framework for Enterprise Architecture" (WoLAF for EA). Die raamwerk lewer 'n bydrae tot die verstaan en bestuur van menslike faktore wat inwerk op die aanvaarding van ondernemingsargitektuur in organisasies.

Slutelwoorde: Ondernemingsargitektuur, ondernemingsargitektuur aanvaarding, menslike faktore, werksvlakke in organisasies en ondernemingsargitektuur aanvaarding, raamwerk vir ondernemingsargitektuur aanvaarding.

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PREFACE

The following Writing Style was used for the thesis:

- NWU Harvard Style was used for the Bibliography (www.nwu.ac.za).
- Italicised text was used for direct quotations.
- Italics have also been used to emphasise words and phrases where necessary.
- Bulleted lists have been punctuated and used in two different ways:
 - Semi-colons have been used to separate items where each item consists of a word or a number of words. Here a bulleted list has the meaning of a list of items.
 - Full stops have been used for a descriptive sentence or a descriptive paragraph. Here the aim of the bulleted list is to make the meaning of the text clear and use white space to increase readability of the text.
- Single quotation marks were used to emphasise special words where meaning is attached that is different from the usual.
- Double quotation marks were used to highlight concepts and terms.
- References to a single chapter, section, figure or table are capitalised whereas references to more than one chapter, section, figure or table start with a small letter.
- The terms “work level” and “work role” have been defined and used in this thesis. Where these terms have been referenced from the literature, the meaning of these terms may be different from their intentional meaning in the thesis.

Design Science Research vs. Design Research

- The research paradigm of design science research (DSR) was used in this thesis. The term “design research” was used in the thesis to refer to the strategy and methodology used for the DSR research paradigm. Distinct differentiation was made between artefact construction (learning through building) as described by Vaishnavi and Kuechler (2013) and the study of design to which many other disciplines for example building architecture and engineering refer.