

PROFILE SHEET WSP-G3-024 “DATA SCIENTIST”

G3 Web Skills Profiles - version 2.0

Generation 3 European ICT Professional Profiles

Appendix to the official specification of 30 June 2014

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- Editor:**
- Pasquale Popolizio (Group coordinator [IWA Italy - Web Skills Profiles](#))
 - Roberto Scano (President [IWA Italy](#))
 - Alessandra de Seneen
 - Concetta Ferruzzi
 - Silvia Losco
 - Antonio Ottaiano
 - Paolo Podda
 - Emanuele Rizzardi
 - Monica Scannapieco
 - Daniele Sghedoni
 - Antonino Virgillito
 - Walter Vannini

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Table of Contents

Copyright	1
Table of Contents	2
Profile WSP-G3-024. Data Scientist	3
Appendices.....	7
Appendix A. Glossary.....	7
Annex B. Profile sheet structure	7
Annex C. References.....	8

Profile WSP-G3-024. Data Scientist

This section is normative.

The profile sheet, listed below and described in appendix B, is an integral part of the document, "G3 Web Skills Profiles - version 2.0 - Generation 3 European ICT Professional Profiles", official specification of 30 June 2014" [WSPG3-03].

Profile WSP-G3-024	Data Scientist
Summary statement	Professional position that promotes activities related to the management and communication of corporate knowledge, identifying procedures, instruments, processes, and practices finalized to promote the development of intellectual capital through sharing.
Mission	<p>The Data Scientist identifies, collects, prepares, validates, analyzes, interprets data related to various activities of the organization in order to extract information (synthetic or derived from the analysis including so calling "insights"), including through the development of predictive models to generate organized systems of advanced knowledge. With an excellent understanding of the business and / or mission of the organization, the Data Scientist identifies and accesses data sources able to support and develop a particular business process; chooses methods and models most suitable and effective for guiding the company's strategic decisions, develop lines of evolution and operational plans; abstracts the information obtained and, through these, generates directions and development programs of action.</p> <p>The Data Scientist presents information in the most appropriate way to support tactical and strategic decisions of management, paying particular attention to issues related to the synthesis and to the representation and effective display of information.</p>
Deliverables	<p>Accountable (A)</p> <ul style="list-style-type: none"> • Data Choice and acquisition. • Analysis of data in tabular or graphical form. • Interpretation of the analysis in text and graphics. • Reports containing analysis and guidance warranted by the analysis. <p>Responsible (R)</p> <ul style="list-style-type: none"> • Market report profiling. <p>Contributor (C)</p> <ul style="list-style-type: none"> • Marketing plans.

	<ul style="list-style-type: none"> • Selling plans.
Main tasks	<ul style="list-style-type: none"> • Integrate organizational figures that express needs related to data analysis. • Activities of elicitation and collection of business needs. • Plan and prepare data analysis adequate to meet the needs. • Identification of significant data and their corporate or external sources. • Activities of collection of data. • Validate (data quality) the data. • Analyze the data. • Building quantitative and qualitative models. • Building predictive models. • Interpreting analysis and models. • Communicating in an appropriate form (graphical and / or textual) the indications emerging from analyzes and models. • Collaborate with the business and address their needs. • Work with IT to define how the collection and management of data should be handled. • Work with the controller to develop analysis and reporting to support decision-making.
E-CF competences	<ul style="list-style-type: none"> • A.6. Application Design: Level e-3. • A.7. Technology Trend Monitoring: Level e-4. • B.1. Application Development: Level e-2. • B.3. Testing: Level e-3. • B.5. Documentation Production: Level e-3. • C.1. User Support: Level e-3. • C.3. Service Delivery: Level e-3. • C.4. Problem Management: Level e-3, e-4.
Skills / Knowledge	<p>Technical</p> <ul style="list-style-type: none"> • Collection of requirements. • Descriptive statistics. • Univariate and multivariate analysis. • Quantitative and qualitative methods. • Clustering techniques (eg. K-Mean, Fuzzy K-Mean). • Multidimensional data modeling. • Display of Quantitative Information (QlikView, Tableau, TIBCO Spotfire). • Structured and unstructured data management. • Management of data quality. • Design of algorithms. • Methods of inference. • Methods of textual analysis. • Models and methods for decisions.

	<p>Informatics</p> <ul style="list-style-type: none"> • SQL Language query. • ETL Tools (Extract, Transform, Load). • OLAP systems. • Systems of statistical analysis such as R, SAS, SPSS. • Scripting languages such as bash, PHP, PERL, Python. • Platforms for data management. <p>Strengthening</p> <ul style="list-style-type: none"> • PMML (Predictive Model Markup Language). • Platforms and Big Data applications (eg. Hadoop, MapReduce, Splunk, Cassandra). • Platforms for Machine Learning (eg. Apache Mahout). • Business analytics. • Critical analysis of the objective data.
<p>Key Performance Indicators (KPIs)</p>	<ul style="list-style-type: none"> • Number of projects taken over and completed.
<p>Qualification / Certifications <i>(this section is informative)</i></p>	<ul style="list-style-type: none"> • Master / Specific training courses.
<p>Attitudes (non ICT) <i>(this section is informative)</i></p>	<p>Interpersonal and Organizational</p> <ul style="list-style-type: none"> • Communication. • Leadership. • Teamworking and team management. • Creativity. • Flexibility. • Problem solving. • Value creation. • Business sense. <p>Linguistic</p> <ul style="list-style-type: none"> • Good knowledge of the national language or the language used by the working group - minimum level: B1 QCER. • Good knowledge of the English language - minimum level: B2 QCER.
<p>Relationships / Reporting line <i>(this section is informative)</i></p>	<p>Interacts with:</p> <ul style="list-style-type: none"> • IT Manager • Master Data Manager • Responsible business lines • Controller and business data analyst • Top management (CIO, CFO, CEO, COO, ...) • Web Project Manager • Digital Strategic Planner

- Knowledge Manager

Reports to:

- Head of the strategies / controller (in large companies)
- Responsible for the business / controller (in medium-large companies)
- General Manager (SMEs)

Appendices

Appendix A. Glossary

Informational (informative)

for the purposes of information and not required for compliance.

Note: The content required for compliance is referred to as "normative".

normative

Required for obtaining compliance.

Note: Content listed as "informative" or "non-normative" is never necessary for compliance.

Annex B. Profile sheet structure

The Web skills profiles are identified by an unambiguous code and are structured in reference to paragraph 4.2 of the CWA CEN document, "European ICT Professional Profiles" [CWA-01] updated upon European e-Competence Framework 3.0 [CWA-02].

- **Profile Title.** Name - including the identification code - of the Web skill profile according to the unambiguous international catalogue from the IWA/HWG.
- **Summary statement.** Lists the primary purpose of the profile. The purpose is to give all stakeholders and users a brief, concise description of the specified Web skill profile, written in a form understandable by ICT professionals, managers, and Human Resources staff.
- **Mission.** Describes the basic assignment of the profile. The purpose is to specify the working role defined in the Web Skill Profile.
- **Deliverables.** Describes the documents produced by the job description as accountable (guarantee), responsible (support), and contributor (contribution).
- **Main tasks.** Provides a list of typical tasks carried out by the profile. A task is an action undertaken to achieve a result in a broadly defined context and contributing to the definition of the profile.
- **E-CF competences.** Provides a list of the skills necessary (taken from the e-CF references) to carry out the assignment. A skill is the outcome of the previous definition of the Profile and helps to differentiate profiles.
- **Skills / knowledge.** A list of abilities and knowledge necessary for the definition of the profile, subdivided into technical, informatics, and strengthening (improving abilities for the profile).
- **Key Performance Indicators (KPIs).** Based on KPI (Key Performance Indicators), the area of application of the KPI is a more generic indicator, consistent with the grade level of the overall profile. It applies for adding depth to the assignment.

- **Qualification / Certifications.** These are the recommended, but not essential, qualifications and certifications for carrying out the activities in the profile. However, these qualifications and certifications may be used for developing knowledge of specific skills within the profile. This section is for informational purposes.
- **Attitudes (non ICT).** A list of aptitudes supporting the abilities and knowledge, subdivided into interpersonal/organizational and linguistic. This section reports references to the QCER [CE-01], which promotes the understanding of specific language certifications. This section is for informational purposes.
- **Relationships / Reporting line.** A list of Web skills profiles and not with whom the profile discusses (relationships) or reports (reporting lines). This section is for informational purposes.

Annex C. References

[CC-01]	Creative Commons <i>Attribution-ShareAlike 4.0 International (CC BY-SA 4.0)</i> http://creativecommons.org/licenses/by-sa/4.0/deed
[CE-01]	Council of Europe <i>Common European Framework of Reference for Languages: Learning, Teaching, Assessment (CEFR) (January 2002)</i> http://www.coe.int/t/dg4/linguistic/CADRE_EN.asp
[CWA-01]	CEN (European Committee for Standardization) <i>CWA 16458:2012 European ICT Professional Profiles updated by e -CF version 3.0 competences (March 2014)</i> http://relaunch.ecompetences.eu/wp-content/uploads/2013/12/EU_ICT_Professional_Profiles_CWA_updated_by_e_CF_3.0.pdf
[CWA-02]	CEN (European Committee for Standardization) <i>CWA 16234:2014 Part 1. European e-Competence Framework 3.0. A common European Framework for ICT Professionals in all industry sectors (March 2014)</i> http://ecompetences.eu/wp-content/uploads/2014/02/European-e-Competence-Framework-3.0_CEN_CWA_16234-1_2014.pdf
[WSPG3-01]	IWA (International Webmasters Association) <i>G3 Web Skills Profiles - version 2.0 Generation 3 European ICT Professional Profiles Official specification of 30 June 2014 (English version)</i> http://www.skillprofiles.eu/stable/g3/en/2013-06-30.pdf