Proposal of Categories and Availability of ITIL® Tools

Lukas Kralik, Roman Senkerik, Jakub Nozicka

Abstract—This paper was created on the basis of the "Proposal of Methodology for Evaluating Free and Open Source ITIL® Tools." The paper focuses on the generally dividing and availability of ITIL® tools which is important for choosing the appropriate tool for implementation. Implementation of proprietary SW is too expensive and many medium-sized and small companies cannot afford that. Main objectives of mentioned project was to provide the manual which may help IT managers and administrators whit ITIL® implementation in their companies.

Keywords—ITIL®, ITIL® tools, tools categorization, IT service support, ITIL implementation, multicriterial evaluation.

I. INTRODUCTION

WITH development of information and communication technologies (ICT) and their intrusion into all sectors, gaining management and delivery of IT services different dimension and meaning. The quality of providing or managing of IT services can greatly affect the operation or performance of the company. For this reason it was introduced, the now internationally acclaimed standard known as ITIL®. It is an abbreviation for Information Technology Infrastructure Library. It is a set of concepts and practices that allow better planning, use and improve the use of IT, whether by the providers of IT services or by the customers.[2][3]

The project originated in Great Britain in the mid 80s. Development of the first version lasted until 1995, and except of Great Britain it was applied and also used in the Netherlands.[3] Since then ITIL® undergone a series of changes so that it always match the current demands and conditions. Currently is ITIL® in version 3 (ITIL ® V3) and consists of five key books (titles) - hence the name for the library:

1. Service Strategy
2. Service Design
3. Service Transition
4. Service Operation
5. Continual Service Improvement

According to the general definition of tool is a means of realizing certain activities, possibly used to communicate the

results of that activity. The tool is tied to a specific technology or with some real technological or social procedure (or process). Based on this definition and the current version of ITIL® v3 can say that ITIL® is an arbitrary software tool which use leads to provably improve and streamline the providing and managing IT services. The only condition is that there must be a SW. It follows that as ITIL® tool can be used even standard office software. Everything stems from its use. Many SW is described as ITIL® tool, but if not properly used so labeling it as ITIL® tool is certainly not in place.[4]-[8]

The uses of ITIL® tools are complicated due to the wide range of offered tools and often very expensive. This caused and to a certain extent still causes small and medium companies are disinterest of the use of ITIL®. On the other hand, recently is beginning to discover significant amounts of Free and Open Source SW even between ITIL® tools.[2][3]

II. CATEGORIES FOR ITIL® TOOLS

Due to the variety of software tools that support service management according to ITIL ® is very difficult to create and define a formal category for ITIL ® tools. The vast majority of software tools that are currently used in practice support a variety of processes. Tools focused on only one process is almost a matter of history. [4]-[8] Categorization ITIL® tools according to the current version of ITIL ® V3 is so complicated that the current version focuses on the management of IT services compared to the ITIL ® V2 was focused on the processes which allow easier categorization.[1], [10], [12]

SW, which can be used as ITIL® tools, can be generally divided into three basic categories by (fig. 1):

1. Availability - way of licensing
2. Number of main functions
Main purpose

A. Division by availability

The simplest division ITIL® tools are according to availability or by the license under which it is available.

1. Proprietary SW
   - Commercial SW
   - Freeware
2. Open Source SW
3. Free SW

1) Proprietary SW

Also known as a closed source software is software where its author modifies licenses (typically EULA) or otherwise, the possibility of its use. For such software is usually available free source code or it is impossible free to make modifications and distribute the resulting work.

a)   Commercial SW

It is distributed for a fee. This means that if you want to use the product, you have to pay for creators. Such software usually can only be used by the limitation of its license. It is often limited by number of installations of software simultaneously, transfer, license or right to modification of the product.

b)   Freeware

This type of software is distributed free of charge (or for a symbolic fee type of mission cards, often the author allows (but does not require) for the satisfaction of sending a donation), sometimes is talked about the type of software licenses. Conditions for the free use and redistribution are defined in the license agreement, which is often specific to each freeware.

The freeware author retains the copyright, for example, does not allow any program modification or restrict free use only for specific purposes (eg various combinations of the following restrictions: only for non-commercial purposes, only for personal use, only the home PC, only education in schools, only charities, only specific types of equipment, just to view files generated by the actual paid software, etc..). In some cases, the author also requires free registration or restricts the manner of distribution. Some freeware can also be used in companies working on computers, but only if it is not used for the direct providing of commercial services. Freeware software is so different from Free Software or Open Source software.

2) Free and Open Source SW

At first sight, the differences between Free and Open Source SW minimal and for layperson it is easy to swaps between these two types of SW. The main difference is the ideology of Gross.

a)   Open Source SW

According to the Open Source Initiative, the SW must meet several requirements. These assumptions are not restricted as it could of Open Source associate only to the obligation to provide the purchaser access to the source code of a computer program, but also include other legal relations. These are the following requirements to be met by the license terms to a computer program (the definition of Open Source version 9.1):

─ Free redistribution
─ Source code
─ Derived works
─ Integrity of the author's source code

─ No discrimination against persons or groups
─ No discrimination against fields of endeavor
─ Distribution of license
─ License must not be specific to a product
─ License must not restrict other software
─ License must be technology-neutral

b)   Free SW

Free software" means software that respects users' freedom and community. Roughly, it means that the users have the freedom to use this SW. Thus, "free software" is a matter of liberty, not price. To understand the concept, you should think of "free" as in "free speech," not as in "free beer".

A program is free software if the program's users have the four essential freedoms:

1. The freedom to run the program, for any purpose.
2. The freedom to study how the program works, and change it so it does your computing as you wish. Access to the source code is a precondition for this.
3. The freedom to redistribute copies so you can help your neighbor.
4. The freedom to distribute copies of your modified versions to others.

B. Division by main purpose

Based on the experience from practice ITIL® tools can be divided into seven categories according to their primary purpose. [9] – [12]

1. Service desk
2. Monitoring, event & remote management
3. Service life cycle
4. Service portfolio and management
5. Cloud
6. Information security
7. Others

1) Service desk

Service Desk is the single point of contact between the service provider and users. A typical Service Desk manages Incidents and service requests and handles communication not only with users but also with the management of the company. For its correct operation are needed different tools. They are mostly integrated into a single software solution most often in the form of a portal. However, there are a number of tools aimed at specific function or process (e.g. Service Level Management - SLM). [1], [10], [12]

2) Monitoring, event & remote management

Previously, these tools can be found under the name of NSM (Network and System Management). Allow monitoring networks and individual elements, systems, servers, applications and tracking incidents and other events by setting thresholds for optimal use of allocated resources and

components. Although it is not a rule, it is integrated into the Incident Management and in most cases allows remote
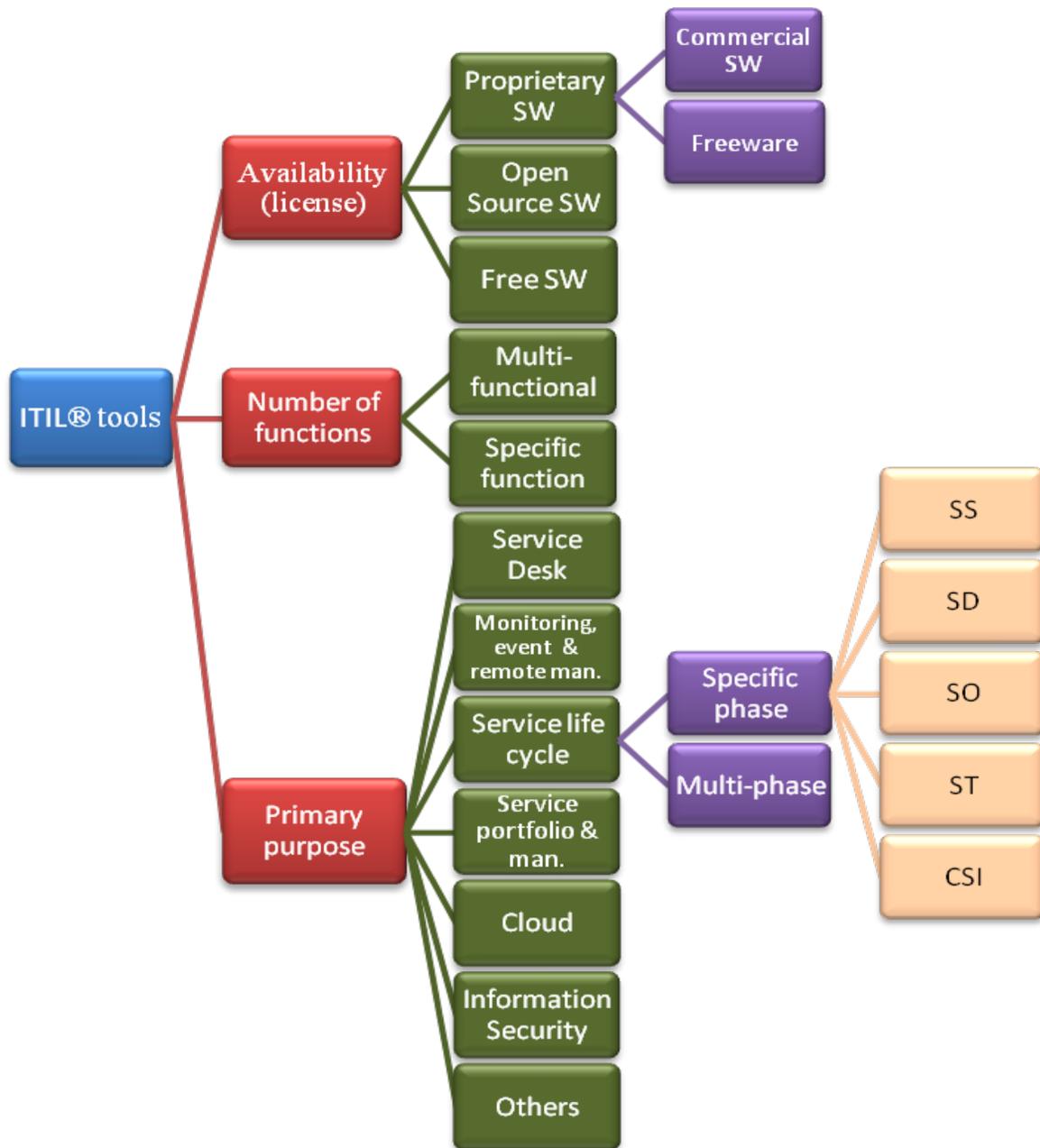
management. [1], [10], [12]

Fig. 1 Categorization of ITIL® tools

3) Service life cycle

Specifically, it is a tool aimed at managing and supporting the entire lifecycle services. This area is also called the ALM (Application Lifecycle Management). But here come the tools of the field, which formally ITIL® does not cover (e.g.

software development).

This type of tools covering various platforms for developers, including support for versioning (source code revision tool), visualization platforms and different ways of testing (functional, security, load, ...) and both manual or

automated.

4) *Service portfolio and management*

Tools in this category helps manage and control a complete portfolio of services, projects and programs. In addition, it is support a variety of processes such as Demand Management, Project Management, Program Management, Financial Management, Time Management and Resource Management.

5) *Cloud*

In this category are tools for the management and providing services in cloud for providers, as well as for users, or customers. Tools allow offer services (ordering), activation (deployment), their providing (provisioning) and of course invoicing (billing). However intervene here even instruments from category Service Desk and all functions are integrated into a single portal solution. [1]

With taking into account to the events at present there is a great emphasis on speed, security, automation and intuitiveness of a particular solution. This category of instruments is typically proprietary software because they are designed for producers and their HW. However, Open Source software today has actually covers a wide range of areas and also for this category is not a problem to find a representative between Open Source and Free SW. [10], [12]

6) *Information security*

This category includes instruments starting with the anti-virus protection, through various tools for data security and test programs (penetration tests) to tools for monitoring. When monitoring is, however, an emphasis on security attributes (data theft, hacking, data corruption, etc.). Included in this category are access control systems (Access Management), which include central authentication and authorization of users, including the use directory services to control access to network elements, mobile devices. Finally, there are also physical security management, data protection and compliance with safety standards. [9]

III. REPOSITORIES AND SEARCHING METHODS

To determine the relevant results were used quantitative research. The main objective was to determine the number of relevant links on the first 10 pages of search engines. As a relevant link has been accepted each link to websites, that mention the ITIL ® tools, or link directly to these tools. Each link has been analyzed and based on the combination of keywords (ITIL® tools, open source, free and download) has been identified as relevant.

Because there is currently no database of ITIL® tools or database of software which can be used as ITIL® tool then the search is too difficult. The best way for search this SW is use Internet search engines. An ideal choice for an Internet search for its popularity and widespread is Google. The next table (see table 1) also confirms that the Google is the most suitable search engine for searching ITIL® tools. This table is showing the count of relevant results at first 10 pages – mainly it is focused on Czech internet.

Table 1: Relevant results

Search engine	Results	Relevant results *(first 10 pages)*
www.seznam.cz	361	4
www.atlas.cz	284	4
www.centrum.cz	336	9
www.yahoo.com	806	15
www.bing.com	3760	7
www.google.cz	93900	21

Another good choice is a website dedicated to open source projects or generally to software tools. Here is the brief list few websites:

— Sourceforge.net
— Dmoz.org
— Opensourcehosting.cz
— Stahuj.cz
— Slunečnice.cz
— ITSMportal.com
— List.ly

On each of these websites is possible to find various SW which can be used as ITIL® tool and included into the above-defined categories. The fact of which ITIL® tool category should be found on mentioned websites is described in following table (see table 2.).

	Sourceforge.net	Dmoz.org	Opensourcehosting.cz	Stahuj.cz	Slunečnice.cz	ITSMportal.com	List.ly
Service desk	✓	✓	✓	?	?	✓	✓
Monitoring, event & remote management	✓	✓	✗	✓	✓	✓	✓
Service life cycle	✓	✓	?	?	?	✓	✓
Service portfolio and management	✓	✓	✓	✗	✗	✓	✓
Cloud	✓	✓	✗	✓	✓	✓	✓
Information security	✓	✓	✗	✓	✓	✓	✓
Others	✓	✓	✓	✓	✓	✓	✓

Used symbols:

✔ – Category included on website;

✘ – Category NOT included on website;

⚠ – Primarily not intended for selected category

IV. CONCLUSION

Update of ITIL® v3 has brought a number of changes. One of them is the approach to ITIL® tools. This change led to simplify the implementation of ITIL®, or allow IT managers to choose from a much wider range of software tools that can be considered as ITIL® tools. Use of ITIL® tools is complicated and often very expensive due to the wide range offer of tools. This caused and to a certain extent still causes small and medium companies are disinterest of the use of ITIL®. On the other hand, recently is beginning to discover significant amounts of Free and Open Source SW even between ITIL® tools.

There are a lot of studies about advantages of Open Source SW and its comparison against proprietary SW. All of these studies have mutual result – using of Open Source SW is cheaper then proprietary even if companies use commercial support for selected tool. It follows that Free and Open Source ITIL® tools are the best choice for small and medium-sized companies.

According to facts above, one of the objectives of "Proposal of Evaluating Methodology for Free and Open Source ITIL® tools" project was to make orientation in offered SW tools easier and also prove to IT managers who working in small and medium-sized companies that the use of ITIL® tools and thus the implementation of ITIL® is not a matter for only large companies and international enterprises.

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