SAP Enable Now – A Web-Assistant for knowledge management and performance support

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Abstract - *Any corporate organization undertaking projects is typically a lengthy and comprehensive activity, varying from 6 months to 24 months based on the scope, complexity, and several other aspects of the organization. As part of the live training of employees, it is often required by them to go through lots of documents and manuals. It has always been a challenge to keep the documentation up to date, with ongoing changes in the configuration as well as any other requirement specification. Over time, new users rarely get the same degree of training as part of the onboarding process.*

With shorter implementation times and quicker adoption of cloud-based applications, enterprises need to rapidly integrate their new customers, and provide them with opportunities to learn the work and provide help whenever they require it during any task. To realize this need, SAP has come up with a tool called, "SAP Enable Now" which serves as "Intelligent Help."

SAP Enable Now is an enterprise platform and on-site information management software. Enable Now's face is the web assistant. It is a web-based user interface that provides end-users with instant, context-sensitive support. Once enabled, Enable Now is available in the SAP Solution application layer which supports both Cloud Edition and OnPremise Edition. It understands the context in which the client needs support and provides only the necessary information in the given situation. When the user clicks on "Enable Now Help Icon" in the right corner of a page, a carousel band appears to the right-hand side of the screen, which guides the user and provides on-screen help.

Key Words: **Web-Assistant, Knowledge-Management, Performance-Support, E-learning, SAP, Enable-Now, Corporate-Learning**

1. INTRODUCTION

E-learning at the workplace is becoming exceptionally prevalent in today's globalized organisation. Especially software organisations, which provide employees with many opportunities to work in a virtual environment, and rely in great extent on e-learning solutions. E-learning solutions are offered in various forms and various tools are made available in the market to meet the customized needs of software companies, as per the type of knowledge transfer they chose to impart to their workforce.

Such type of e-learning technology is being widely adopted in both public and private organisations, owing to the enormous advances of technology and the growing importance of e-learning. Also, e-learning systems are now an indispensable tool for enterprise training due to their modularity, privacy, speed, learning style, customization, evaluation, consistent delivery, and flexibility. E-learning has proved extremely cost-effective in training staff particularly when they are geographically dislocated.

The acquisition, maintenance, and transfer of new learning material to employees are considered strategic instruments for the sustainability of any organisation and is seen as a measure of the employability status of an employee. Training, development, and education (TD&E) activities are some of the most popular and common strategies in organizations for learning. These are defined as measures planned and implemented by organizations to acquire knowledge, skills, and attitudes. Organizations are required to address job deficiencies, prepare employees for new jobs, adapt employees to emerging technologies, and encourage free growth within an organization.

Around the same time, many professionals and researchers have pointed to the minimal transition of academic instruction in real day-to-day organizational activities and thus have identified the 'transfer problem'. Previous studies have shown that only a few things that have been learned are transferred to work [1]. For example, the transition issue is more likely to arise when the training situation is substantially different from the working situation. Several scientific studies, including meta-analysis support this effect[2]. A survey by [3] found that on average 38% of trainees do not apply what they learn, to work-related activities, when it is followed immediately after a class, furthermore this rate rises to 56% after six months, and to 66% after one year.
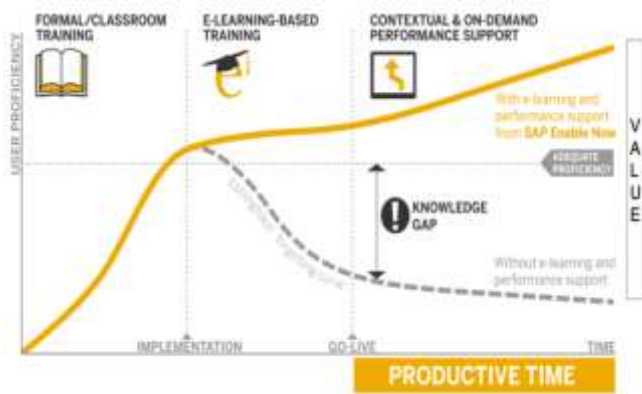
Fig – 1: Blended Learning and Performance Support/User Assistance [9]

Therefore, the need for such an interactive e-learning system arises due to the realization that digital transformation is essential for the survival of every company. This is because the skillset of any organization's employee-base is one the most important building blocks to achieve such digital transformation. The opportunity to improve the basic skillset should not be overshadowed by the lack of knowledge-management owing to issue like data-privacy, knowledge & competence, and legacy IT infrastructure.

To realize the need for the hour SAP has come up with a tool, "Enable Now". It is an end-to-end solution to collaboratively create, manage, and deliver the following:

1. Formal Training: Traditional instructor-led training, LMS-based online courses and assessment quizzes
2. Performance Support: Micro-knowledge and process guidance within the application, such as app-specific guided processes, in-app notifications, and reference materials.
3. Informal Learning: Self-directed learning and sharing of knowledge, which is done through the knowledge portal and user-generated content such as videos.

2. Knowledge Management & Performance Support

As the world is increasingly embracing the power of technology and development, web development is not only becoming a universal solution, but also a progressively intricate one. Most users are delighted by the automation of manual, repetitive tasks. However, users despise apps that provide an overly complex user experience and provide little in the way of user interaction.

As a web-system, Enablement Now provides enrichment of user experience. It provides a range of features all of which are aimed at providing deep and meaningful user interaction.

2.1 Overview

In a rapidly changing corporate structure, it is required by the organization to keep up with the emerging growth of the knowledge content from various corporate sources like:

1. Business Drivers
2. New Product growth
3. Compliance Drivers
4. Risk Management
5. Global Rollouts
6. New Processes
7. Content Re-organization

An organization's diverse content requires that a well-structured knowledge management system is established, which can improve productivity and user experience. The following criteria would apply to such a system:

1. Encourage user adoption and speed up learning curves with contextual, timely, and pro-active delivery.
2. The information should be unique to its purpose.
3. Even after the formal training ends, the information should be available.
4. The program should be relatively versatile, collaborative, and provide numerous resources.
5. End users should be supported with real-time support.

In the context of user experience, there are various content that can be delivered:

1. Learning Management System
2. Application help menu
3. Context-based Help
4. Video Portals
5. Reference libraries
6. Mobile devices
7. Test scripts
8. Business process integration

2.2 Parameter of successful E-learning

1. Information Quality: In the context of information-quality, there is a varied set of dimensions, such as contextual information, intrinsic information, and representational quality. Alla and Faryadi found in their analysis [3], that accuracy of the content presented by the e-learning system is the most influencing factor that affects the quality of

information. This is followed by validity and relevancy.

2. Service Quality: It plays a crucial role as it produces an overall higher customer satisfaction throughout an e-learning program which is important for the organization to have as its ultimate goal. The interpretation of content quality is also often affected by the system's responsiveness, structure, and presentation.

3. User Satisfaction: Usability and accessibility of any e-learning program are one of its most important and influencing dimension that affects the overall efficiency. This plays an important role in a successful user experience that helps to improve performance.

4. Net Benefits: Any e-learning system can be said to have created a successful and positive impact if it fulfills its end-goals of knowledge transfer, enhanced learning, retention, and timesaving are met. The achievement of these objectives contributes to a proportionate increase in the work productivity of workers.

3. Web Assistant

SAP's Enable Now is a web-based assistance system that strives to provide user context-sensitive help. It enables users to get started quickly and to find all relevant information easily without needing to leave the respective application.

It provides in-app guidance specific to the page the user is viewing currently. This is done by demonstrating to the user the new features added to the page and also the guided tours on how to use them.

Using this, it can create, maintain, and deliver learning materials and documentation content, which are directly integrated within a user task application.

These enablement contents are categorized into two different types as follows:

1. Contextual Help Contents
2. Guided Tour Content

3.1 Overview

The integration of web-assistant with organization's network involves adding a new help icon on the pages for which it needs to be enabled. On clicking this icon, it will open the web-assistant which would provide the help content in, following the two categories.

1. Context help: This is shown as a list of tiles in the carousel:

1.1. There can be tiles with hotspots, referring to an object on the screen with an additional text bubble once the hotspot or the tile is clicked.
1.2. There are can also be tiles without hotspots, showing a text bubble directly above the tile once it is clicked.
1.3. Some tiles are equipped to open some other web page on clicking them. This web-page gets opened in a light-box on top of the current application screen or in a separate browser tab/window.
2. Guided tours: These are presented in a popup list above the carousel:
2.1. The user will select a guide for his planned activity.
2.2. Guides consist of a sequence of steps each of which describes an action that needs to be executed with an object on the screen

3.2 Expected Outcome

The exact outcome cannot be quantified; it is rather qualitative. Web assistant is expected to help in the following ways:

1. Improve software adoption.
2. Boost workforce productivity.
3. Grow a competitive advantage.

The scope of the assistant is also quite varied. Following are some of it details:

1. Performance Support: Provide the correct information at the right time to get the most from the IT solutions that organisation might invest in.
2. Knowledge Creation: Manage all facets of the transition of corporate knowledge to the users and content management.
3. Soft Skills Training: Create content that can be learned rapidly and effectively, as this adds versatility to various instructional elements and the overall learning experience of the user.

3.3 Technical Overview and Content Scenarios

The frontend is orchestrated as an Angular Application, whereas the backend is served using a Spring Boot Framework, running in a customized Docker Container. The application, being a microservice, has its separate Database, and for that, it uses SAP's proprietary HANA Database.

To serve different needs of client the, Web Assistant supports different scenarios for providing help content for various apps and their needs [8][11]. The scenarios are:

Fig-2: Different Content Scenarios supported

1. Standard Content Scenario
2.

SAP provides Web Assistant content for standard SAP applications by default, which includes context help and guided tours as well as tutorials for the learning app. This content is available for free, the end user consumption does not require an Enable Now instance.
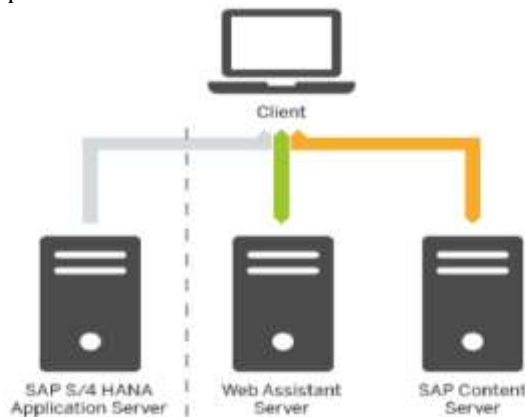

Figure-3: Standard Content Scenario

The standard content scenario is used as follows:
1. Client**:** The user starts Web Assistant from an SAP app by selecting a help control. Once the control has been clicked, the Web Assistant framework and the content are loaded.
2. Application Server**:** The server stores and shows the SAP apps as well as the Web Assistant configuration.
3. Web Assistant Server: The Web Assistant server provides the in-app help framework. The server gets a request to load the framework. The server is hosted by SAP.
4. Content Server**:** The content server stores the standard help content which has been created by the SAP. The server gets a request to load content for a specific app and context. The server is hosted by the SAP.

3. Extended Content Scenario
Besides, there is also the possibility to customize default content and to create user-defined content which can be played back, merged with the default content. The extended content scenario is based on the standard content scenario.
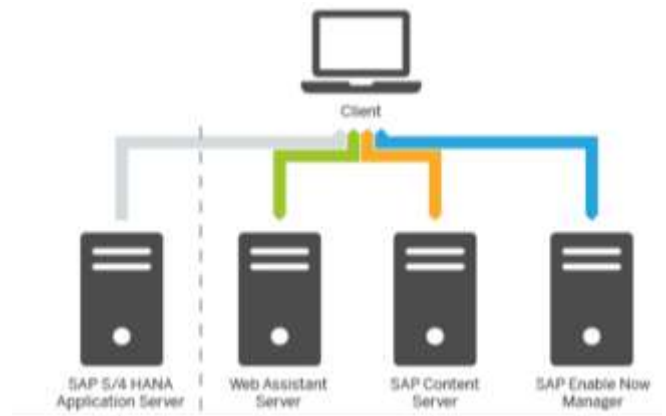

Fig-4: Extended Content Scenario

The extended content scenario is used as follows:

1. Client: The user starts Web Assistant from an SAP app by selecting a help control. Once the control has been clicked, the Web Assistant framework and the content are loaded.
2. Application Server: The server stores and shows the SAP apps as well as the Web Assistant configuration.
5. Web Assistant Server: The Web Assistant server stores the framework of the in-app help. The server gets a request to load the framework. The server is hosted by SAP.
3. SAP Content Server: The content server stores the standard help content which has been created by SAP. The server gets a request to load content for a specific app and context. Customized content is loaded from the Manager instead of the content server. The server is hosted by SAP.
4. SAP Enable Now Manager: The Manager stores the user-defined content which will be loaded in parallel to the standard content for merged consumption. The client can customize the standard content and create new content. The server gets a request to load content for a specific app and context.

4. Customer Content Scenario
Enable Now provides the possibility to create user-defined content which can be played back.
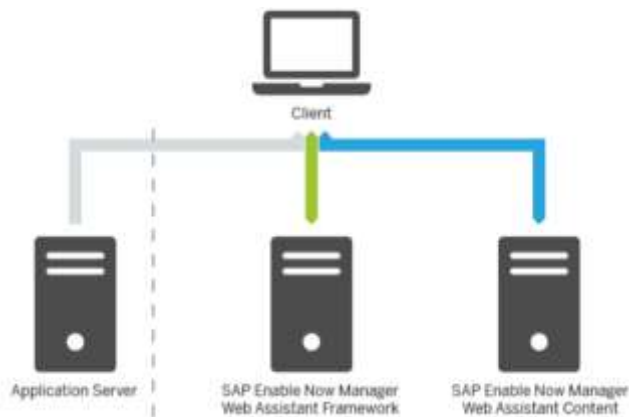
Fig-5: Customer Content Scenario

The customer content scenario is as follows:

1. Client: The user starts Web Assistant from an SAP app by selecting a help control. Once the control has been clicked, the Web Assistant framework and the content are loaded
2. Application Server: The server stores and shows the SAP apps as well as the Web Assistant configuration.
3. Web Assistant Framework: The Enable Now Manager stores the framework of the in-app help. The server gets a request to load the framework. The Enable Now Manager is hosted by SAP.

Web Assistant Content: The Enable Now Manager stores the user-defined content. The server gets a request to load content for a specific app and context.

3.4 Basic Operational Flow

The Manager collaboration scenario begins with the initial setup of the server machine. This is usually done by an administrator, who installs the necessary software dependencies and the Manager web application itself. They must also configure the role and permission scheme to enable users to access and edit or just consume content. Multiple central work areas can be stored in one instance of the Manager belonging to different authoring teams to create and maintain their content structures. Already existing central work-areas can be migrated very fast and easily into the Manager [10].

The master author (project lead) sets up the Manager, that manages content lifecycle which includes creating meta-objects like milestones and priorities, workflows, work areas, and initial content structures. Having finalized contents they can upload and assign them to other authors or explicit reviewers to approve them for correctness and consistency.

Learners access the contents via the learner view or by other distribution devices and process the contents to enhance their skills in the topics provided with contextual help.

The user accesses the contextual help content present on a webpage by accessing it through the Enable Now carousel. This carousel contains various help tiles with assigned hotpots.
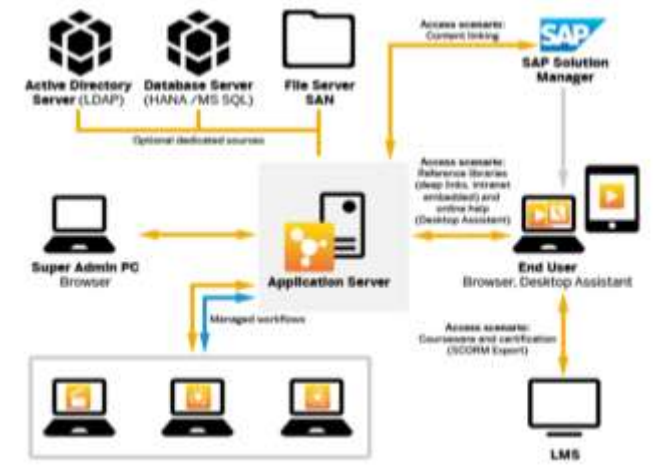

Fig-6: Network Architecture with Manager [10]

4. Conclusion

To summarize, Enable Now makes the conventional methods of the training process to be fundamentally modified. In this current digital age of on-the-job and ongoing learning paradigms, this is an ideal instrument to help companies execute the learning process right on the user's working system. This allows the web assistant to provide the user with a blended learning process that reduces the knowledge gap between the experienced user and the novice user as they progress in their use of several contextual support items present on the page. All pre-delivered content can be customized to their optimized processes by the organizations. Pre-requirements for Enable Now are a license, client systems, and admin rights. The technical framework of Enable Now can be used to support any major cloud solutions. The help contents can be created by the SAP as well as the clients which can be embedded and delivered so that customers and partners who can flexibly customize and extend the offered content according to their needs.

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