

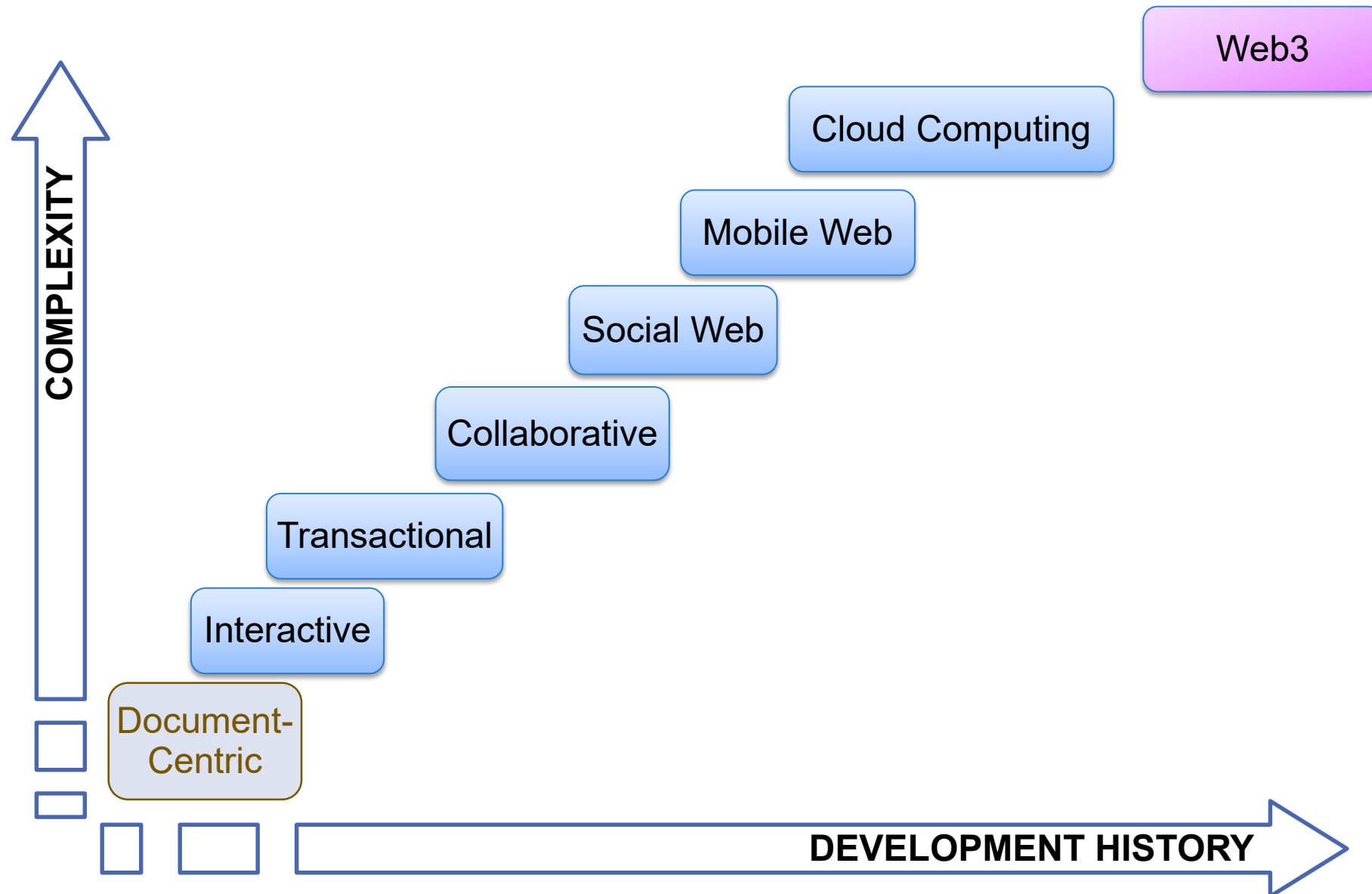
Unit 1. Introduction

Web Applications and Web Services

Web Applications (Web Apps)

- ▶ “A **software system** based on technologies and standards of the World Wide Web Consortium (W3C) that provides Web specific resources such as content and services through a **user interface**, the Web browser” (Kappel et al.)
- ▶ Therefore, this definition excludes:
 - ◆ Web sites without software components (e.g. static HTML pages)
 - ◆ Web services

Web Apps Evolution



Characteristics of Web Apps

- ▶ Network intensiveness
- ▶ Global reach and Unpredictability
 - ◆ Who are the users?
 - ❖ Usage patterns
 - ❖ Backgrounds: language, culture, age, education, ...
 - ◆ How many users?
 - ❖ Potential / Occasional / Frequent users
 - ❖ Concurrency: average, peaks
- ▶ Space / Time
 - ◆ Internationalization
 - ◆ Location-aware services
 - ◆ Availability

Characteristics of Web Apps

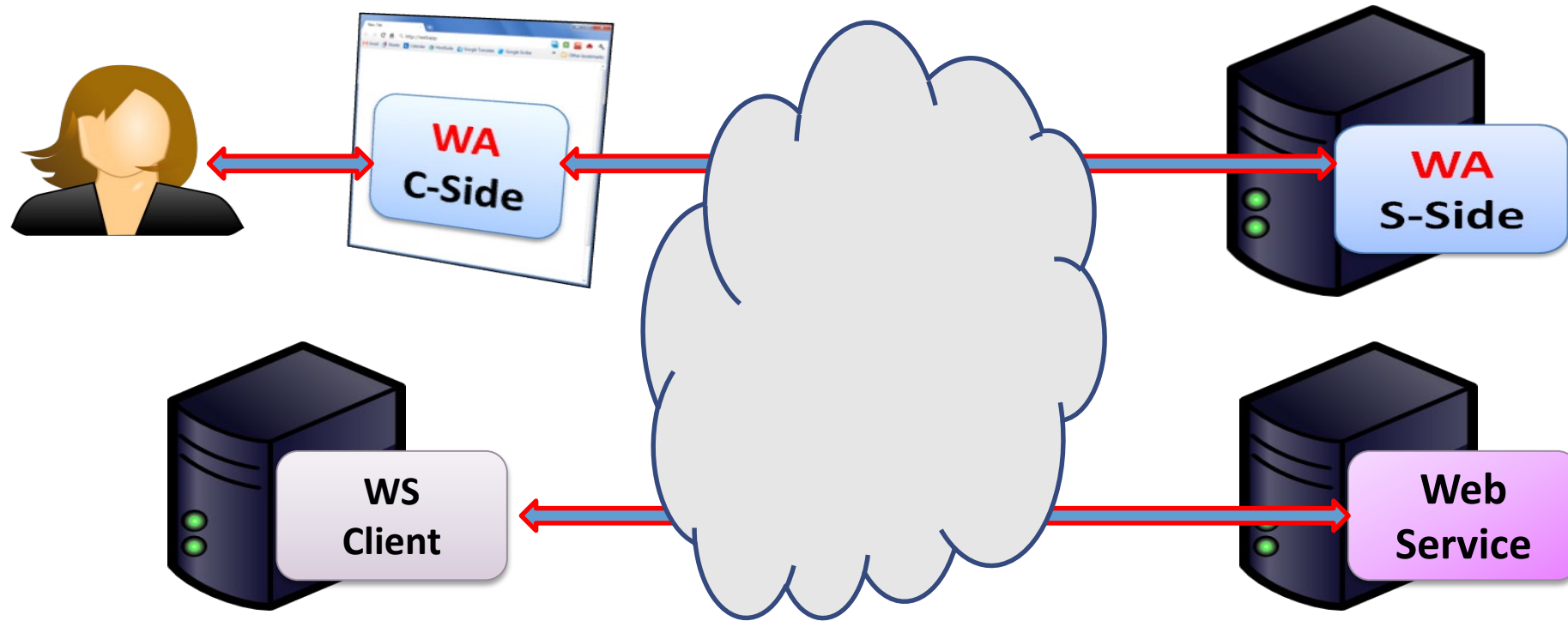
- ▶ Hypertext
 - ◆ No-linearity
 - ◆ Navigation
- ▶ Content-driven
 - ◆ Document-centric
 - ◆ Multimedia
- ▶ Look and feel
 - ◆ Usability / Aesthetics
 - ◆ Accessibility
- ▶ Continuous Evolution
- ▶ Security



Technologies for Web Apps

- ▶ Web Standards
 - ◆ HTTP, HTML, XML, CSS, etc
- ▶ Programming Languages:
 - ◆ PHP, JavaScript, Perl, Java, Python, etc
- ▶ Web Frameworks:
 - ◆ General-purpose: Spring, RoR, Laravel, Django, Angular, React, etc.
 - ◆ Vertical markets:
 - ❖ CMS: Drupal, Wordpress, etc.
 - ❖ e-commerce: PrestaShop, Magento, ...
- ▶ Security:
 - ◆ Firewalls, Cryptography, Authentication

Web Apps (WA) and Web services (WS)



A **Web Service** is a programmatically available application logic exposed in a well-defined manner over standard Web protocols

References

- ▶ C. Farré: Desenvolupament d'Aplicacions Web. **Revista de Tecnologia**, núm. 7 (2017), p. 20-29. [PDF](#)
- ▶ R. G. Pressman, D. Lowe: **Web Engineering. A Practitioner's Approach**. McGraw Hill, 2008. Chapter 1.
- ▶ KAPPEL, Gerti et al: **Web Engineering**. Wiley, 2006. Chapter 1.