

Siri Wacana Ilmu ICT 2/2017

WEB EVOLUTION

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Kandungan

1. Latarbelakang ‘Web’
2. Kod URL
3. Evolusi Web
 1. Web 1.0
 2. Web 2.0
 3. Web 3.0
 4. Web 4.0

Latarbelakang 'Web'

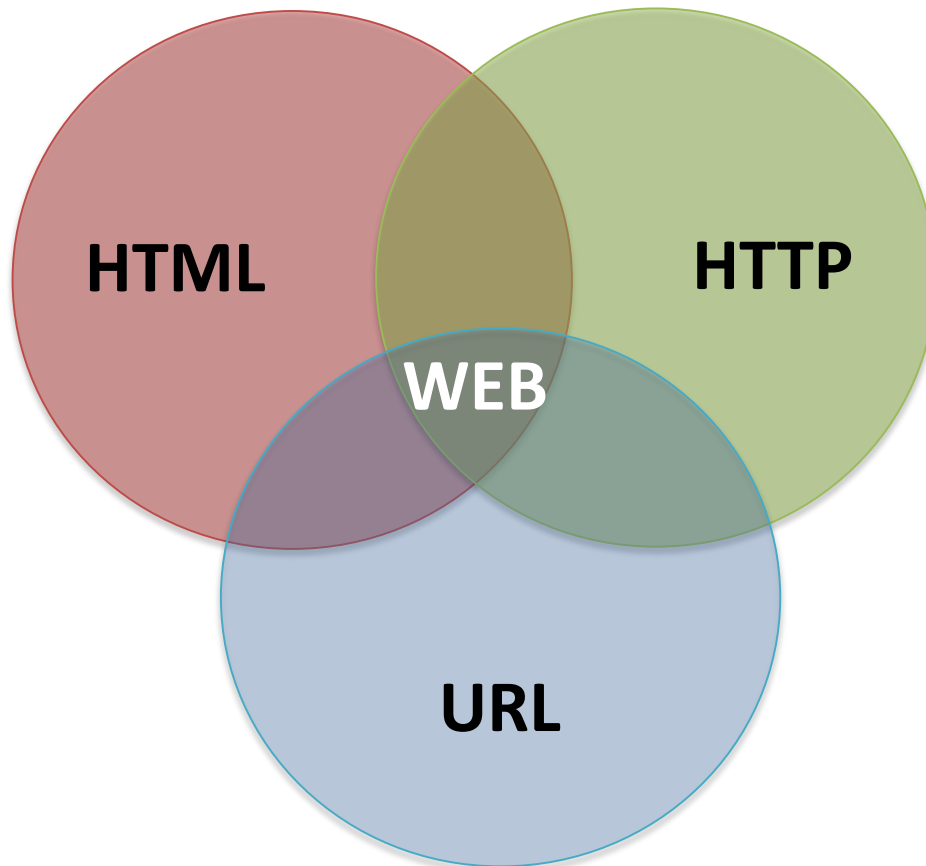
- World Wide Web (www.) atau Web
- Mula wujud 1989
- Pengasas - **Sir Tim Berners-Lim** (saintis computer British)
- Masalah – sukar untuk berkongsi maklumat



inovatif • entrepreneurial • global

Latarbelakang 'Web'

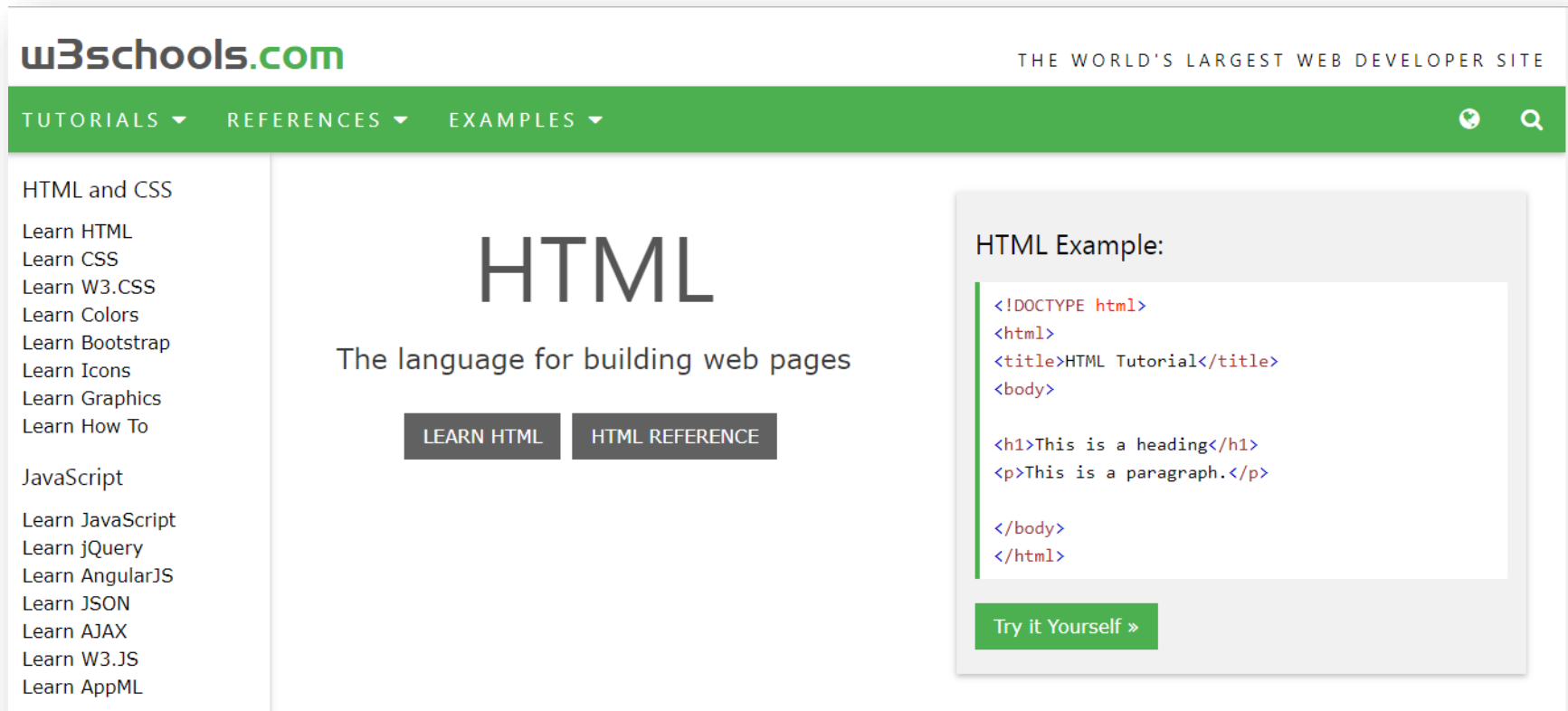
- Mula menulis 3 teknologi asas :



1. **HTML (*HyperText Markup Language*)** – bahasa web, eg.
`<h1>Hello World</h1>`
2. **HTTP (*Hypertext Transfer Protocol*)** - membenarkan pautan antara web, eg.
`POST /test/demo_form.php HTTP/1.1`
`Host: w3schools.com`
3. **URI (*Uniform Resource Identifier*)**
– alamat unik kenalpasti sumber web, eg.
`https://cict.utm.my`

Latarbelakang 'Web'

- 1994 – tubuh **World Wide Web Consortium (W3C)**
- Komuniti antarabangsa - bina *open web standards*



The screenshot shows the w3schools.com website. The header includes the logo and the tagline "THE WORLD'S LARGEST WEB DEVELOPER SITE". A green navigation bar contains "TUTORIALS", "REFERENCES", and "EXAMPLES" with dropdown arrows, along with social media and search icons. A left sidebar lists various topics like "HTML and CSS", "JavaScript", and "jQuery". The main content area features a large "HTML" heading, a sub-heading "The language for building web pages", and two buttons: "LEARN HTML" and "HTML REFERENCE". A code block on the right, titled "HTML Example:", shows a snippet of HTML code for a page with a heading and a paragraph. Below the code is a "Try it Yourself" button.

w3schools.com THE WORLD'S LARGEST WEB DEVELOPER SITE

TUTORIALS ▾ REFERENCES ▾ EXAMPLES ▾

HTML and CSS

- Learn HTML
- Learn CSS
- Learn W3.CSS
- Learn Colors
- Learn Bootstrap
- Learn Icons
- Learn Graphics
- Learn How To

JavaScript

- Learn JavaScript
- Learn jQuery
- Learn AngularJS
- Learn JSON
- Learn AJAX
- Learn W3.JS
- Learn AppML

HTML

The language for building web pages

[LEARN HTML](#) [HTML REFERENCE](#)

HTML Example:

```
<!DOCTYPE html>
<html>
<title>HTML Tutorial</title>
<body>

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

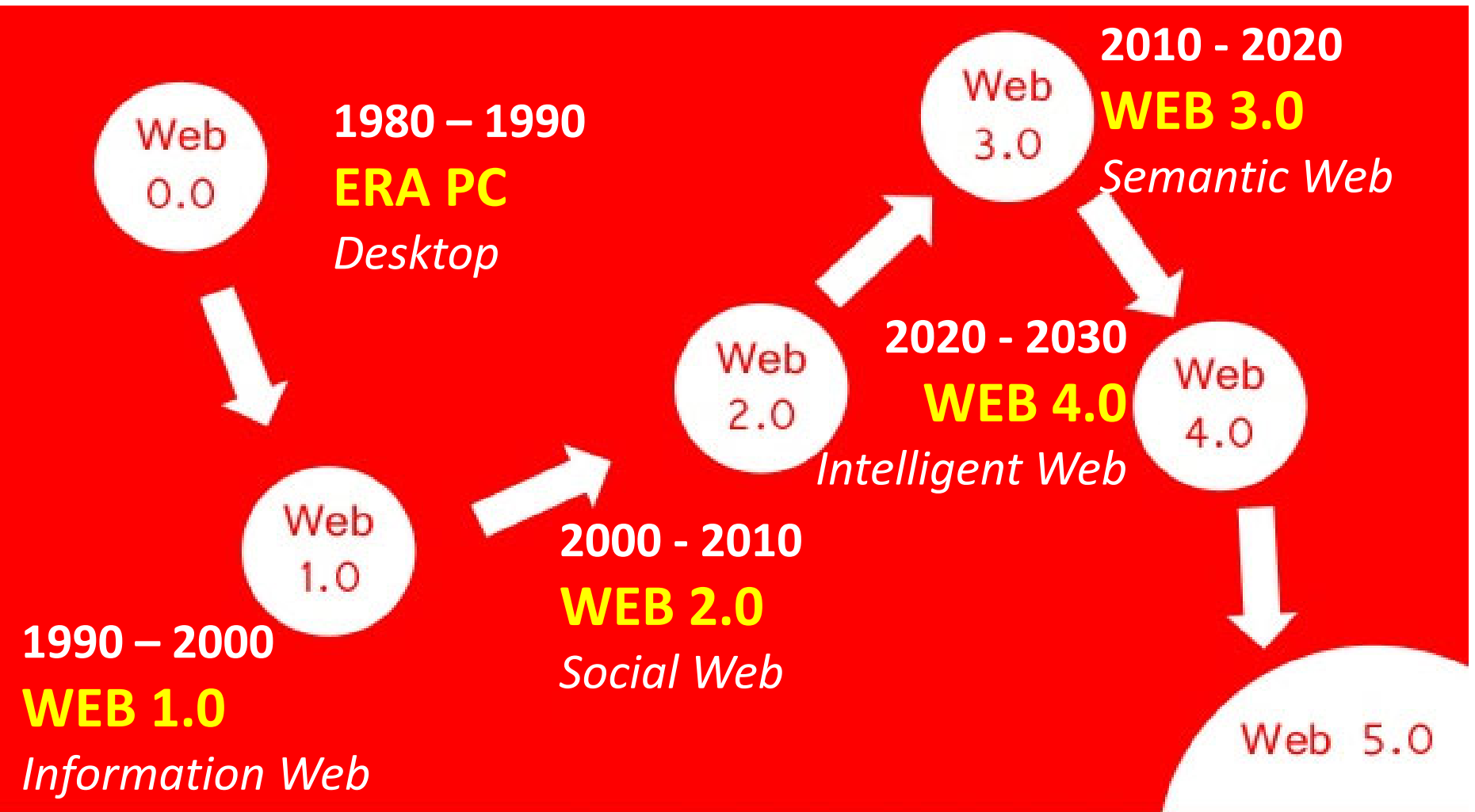
</body>
</html>
```

[Try it Yourself »](#)

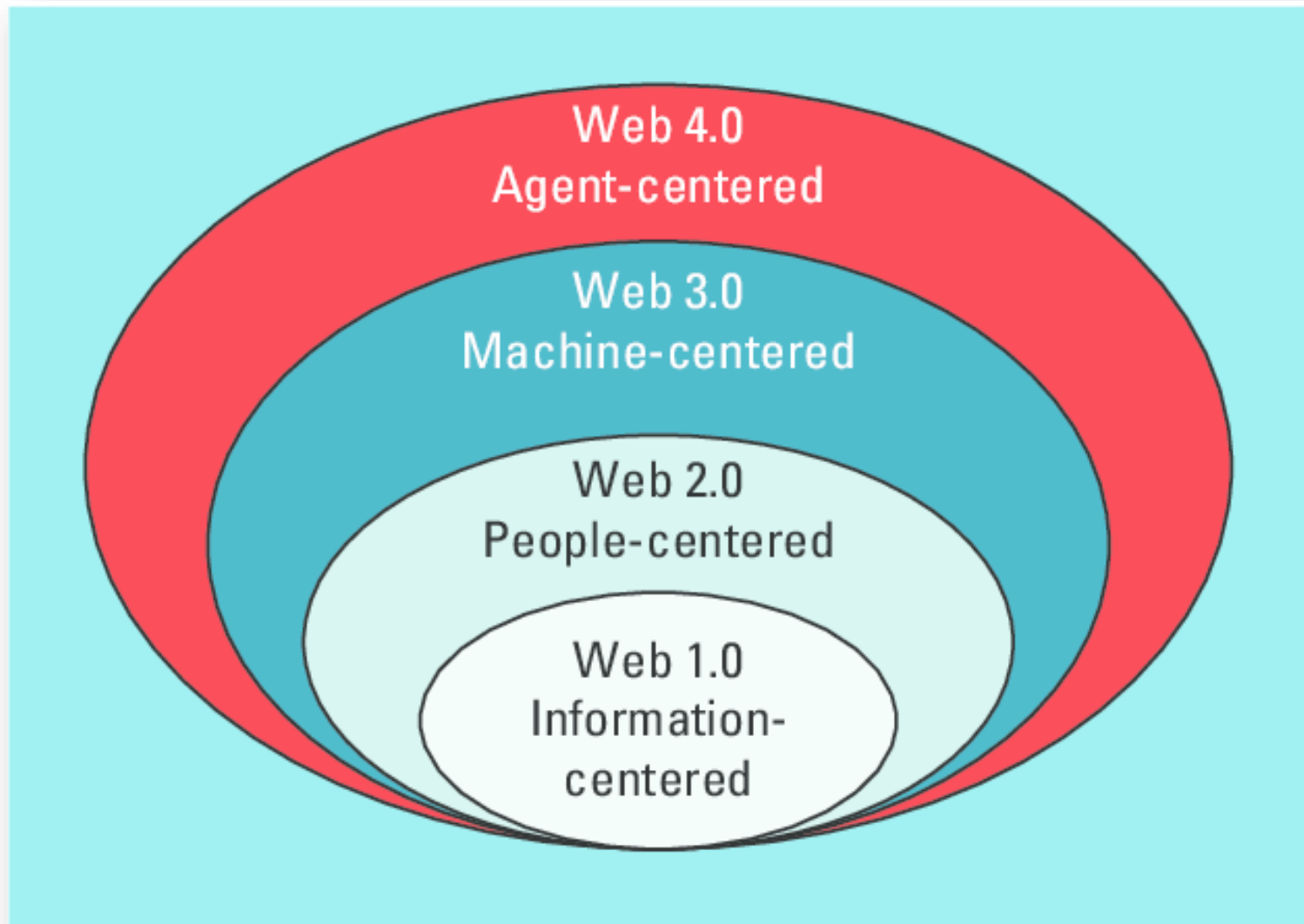
Kod URL

- Dikenali juga sebagai ***Domain Name Server (DNS)***
- Peringkat antarabangsa, nama domain web berakhir dengan kod Negara, cth :
 - **.my** – Malaysia
 - **.co.uk** –United Kingdom
 - **.au** – Australia
 - **.nz** – New Zealand
- Sebahagian yang berakhir mengikut jenis, cth :
 - **.com** – Institut komersial atau Penyedia Servis
 - **.me** – web peribadi
 - **.edu** – Institusi Pendidikan
 - **.gov** – *Government*
 - **.org** – *Nonprofit Organisation*

Evolusi Web



Evolusi Web



WEB 1.0

Information Web

- *Read only web*
- Berkongsi maklumat
- Menghubungkan maklumat
- Kandungan statik, kemaskini / komunikasi sehala
- Contoh : Laman Web Syarikat / Peribadi



WEB 2.0

Social Web

- *Read & write web*
- Saling berinteraksi, menghubungkan pengguna
- Fokus kepada komuniti
- Komunikasi 2 hala, melalui rangkaian sosial, blogging, tagging & wikis
- Contoh : Blogs, Facebook, YouTube, Wikis dll



WEB 2.0

Social Web

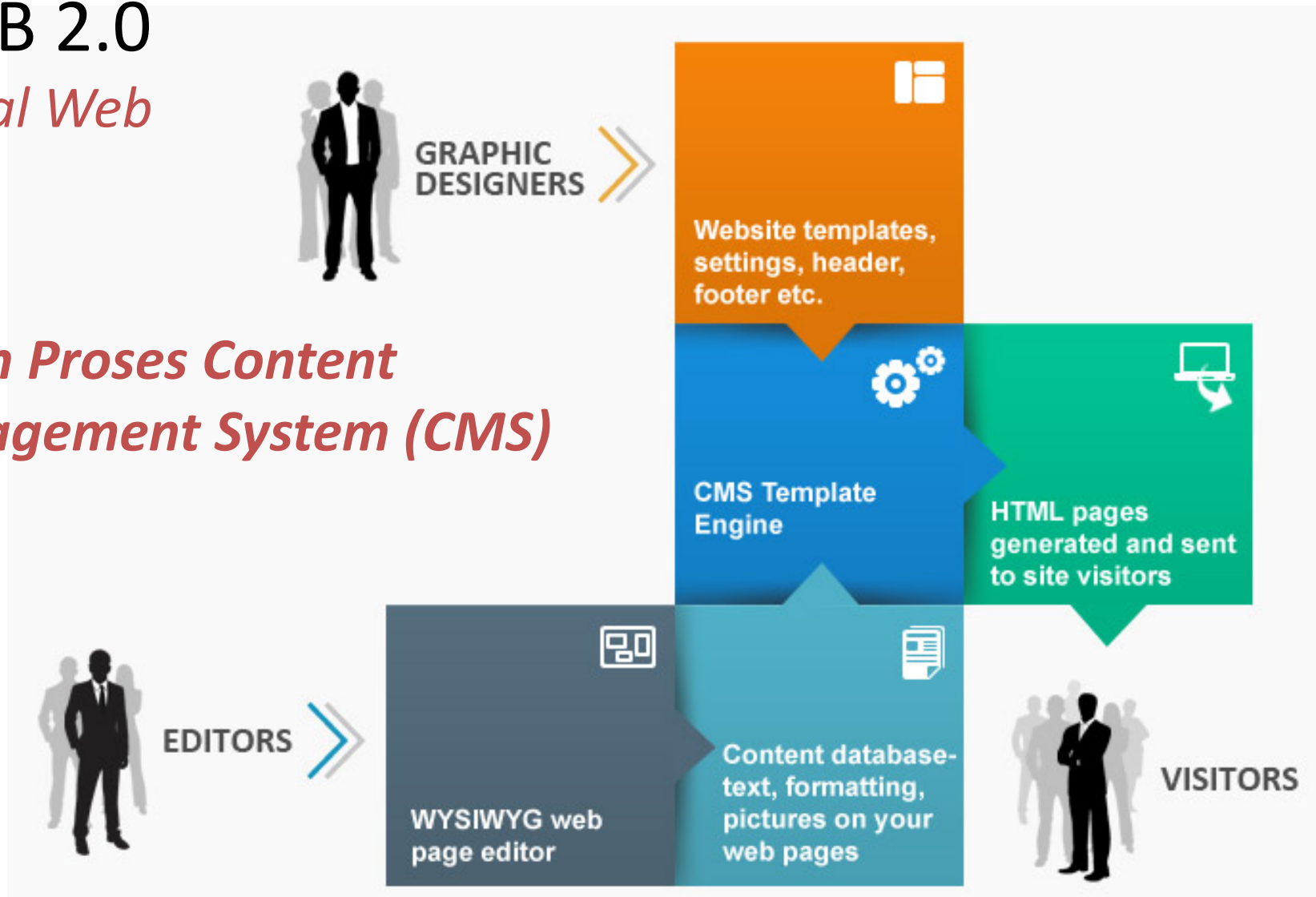
Content Management System (CMS) Software



WEB 2.0

Social Web

Aliran Proses Content Management System (CMS)



WEB 3.0

Semantic Web

- *Read, write & execute web – machine readable*
- Mostly for mobile & personal web
- Menghubungkan pengetahuan
- *Data driven* – data daripada pengguna & web akan berfungsi penuh keperluan pengguna
 - Contohnya, pengguna yang kerap membuat carian 'design blogs', akan muncul iklan-iklan berkaitan 'design'
- Ke arah membolehkan data dicapai sebanyak mungkin di mana sahaja
 - penggunaan telefon pintar & aplikasi awan yang meluas masa kini
- Rekabentuk web bersesuaian & dinamik bagi semua *devices*



WEB 4.0

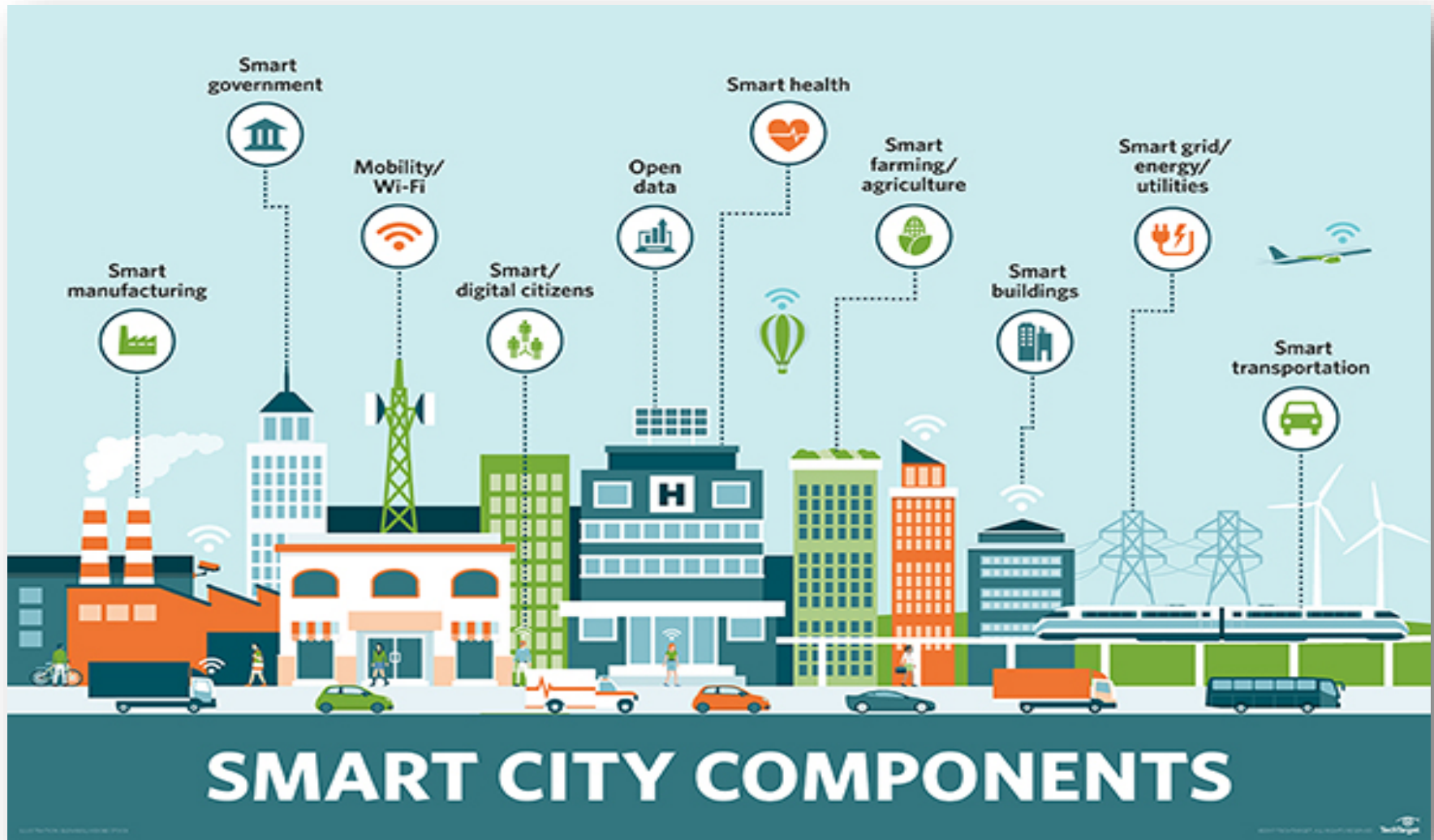
Intelligent Web

- *Read, write, execute & concurrency web*
- Interaksi antara **manusia dan mesin / computer**
- Contoh – mesin bertindak bijak dengan membaca kandungan web & memberi keputusan bagaimana untuk mempercepatkan capaian & paparan web

- Bergerak ke arah penggunaan *artificial intelligence* untuk menjadi sebagai intelligent web.
- *Robotics -> artificial intelligence -> machine learning* - transforming our world into a **connected smart structure**
- Eg. IoT - Smart roads, smart buildings, smart cities, smarter people

WEB 4.0

Intelligent Web



WEB 4.0

Intelligent Web

Contoh *machine learning* application :

- Mesin baca tulisan tangan (handwriting)
- Weather prediction
- Uber price prediction
- Commercial flight
 - AI Autopilot
- Emails Spam Filter
- Plagiarism Checkers
- Dan lain-lain...

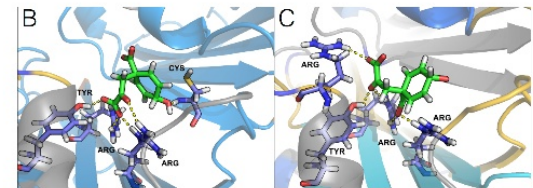
Examples of Machine Learning

Text Recognition



http://commons.wikimedia.org/wiki/File:American_book_company_1916_letter_envelope-2.JPG#filelinks
[public domain]

Biology



Spam Filtering

<https://flic.kr/p/5BLW6G> [CC BY 2.0]

~ Terima kasih ~