



THE WEB, E-COMMERCE AND M-COMMERCE



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REFERENCES

- Wallace, 2014 - Chapter 6

TIPOS DE WEBSITES

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WEBSITES – 4 OBJETIVOS

- Influenciar a su audiencia
- Vender productos o servicios
- Facilitar relaciones offline
- Informar o entretenér a su audiencia

INFLUENCE THE AUDIENCE

- To increase brand awareness, or persuade visitors to consider new technologies and upgrades.
- Automobile manufacturers offer tools to choose accessories and learn about new options
- Nonprofit organizations, political blogs, campaigns, and public service initiatives

SELL PRODUCTS AND SERVICES

- Websites live and die by e-commerce transactions.
 - Overstock.com, iTunes, and Amazon
 - Nonprofits - donations
- The checkout process is critical
 - + features to help visitors find what they are looking for, read product information or reviews, compile wish lists, and buy online

FACILITATE OFFLINE RELATIONSHIPS

- Retail stores offer online buying with in-store pickup
- Hotels feature event planning, virtual tours, reward programs, and food preference surveys, along with online reservations.
- Websites for colleges and universities typically create engaging tours for prospective students

INFORM OR ENTERTAIN THE AUDIENCE

- Offer content that drives traffic to the site.
 - Many sell advertising, or offer premium access to specialized content for fee-paying members.
 - Online magazines, video sites, and free game sites

infomediary

Focuses on informing visitors and empowering them with aggregated information about products from different suppliers.

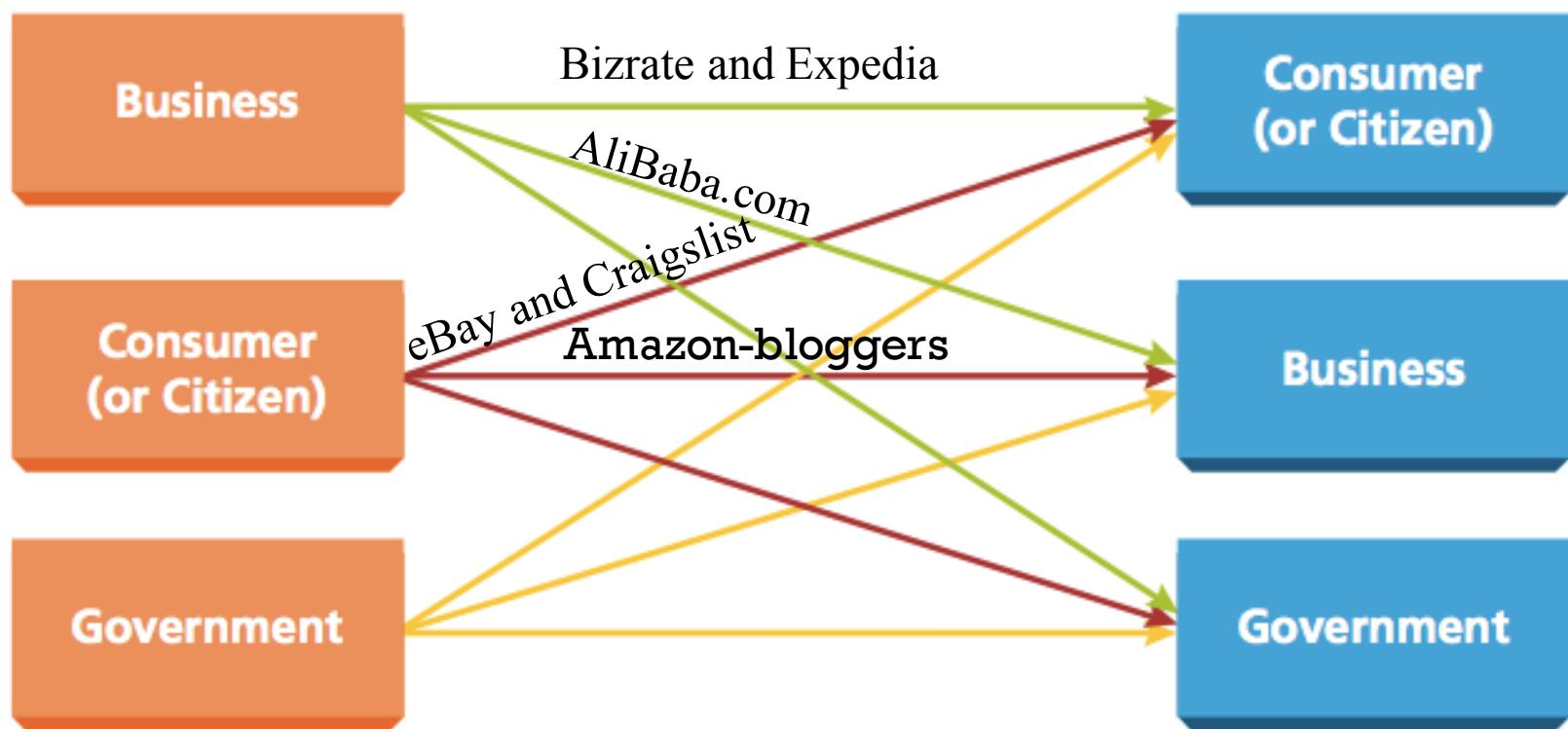
Consumer Reports

e-marketplace

A website that facilitates transactions by bringing together buyers and sellers from all over the world.

Bizrate.com

CLASSIFICATION OF E-MARKETPLACES



C2B, C2C, B2B, B2C

consumer to business (C2B)

E-commerce relationship in which individual consumers can sell products or services to businesses.

business to business (B2B)

E-commerce relationship in which businesses can buy and sell products or services online to one another.

consumer to consumer (C2C)

E-commerce relationship in which individual consumers can buy and sell to one another over the Internet.

business to consumer (B2C)

E-commerce relationship in which businesses offer products for online sale to consumers.

CLAIMING A URL FOR THE WEBSITE

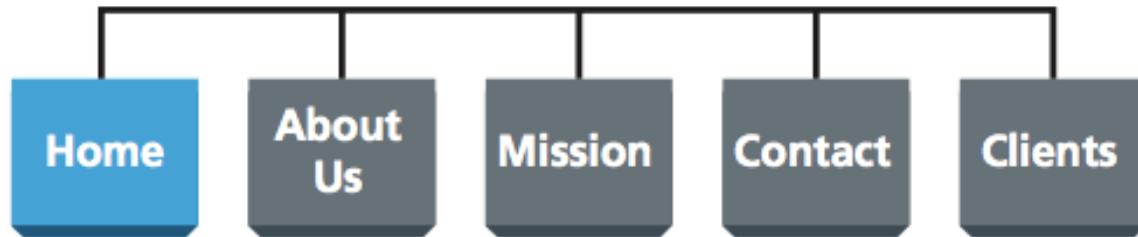
- Virtual real estate: grab the “best” URL,
 - that visitors will most easily remember or could easily guess
 - Domain name disputes break out, legal battles are common
- The Internet Corporation for Assigned Names and Numbers (ICANN) is the nonprofit organization charged with overseeing the net’s naming system.
 - works out contracts with the organizations that manage URL assignments within each of the top-level domains

DISEÑOS DE WEBSITES

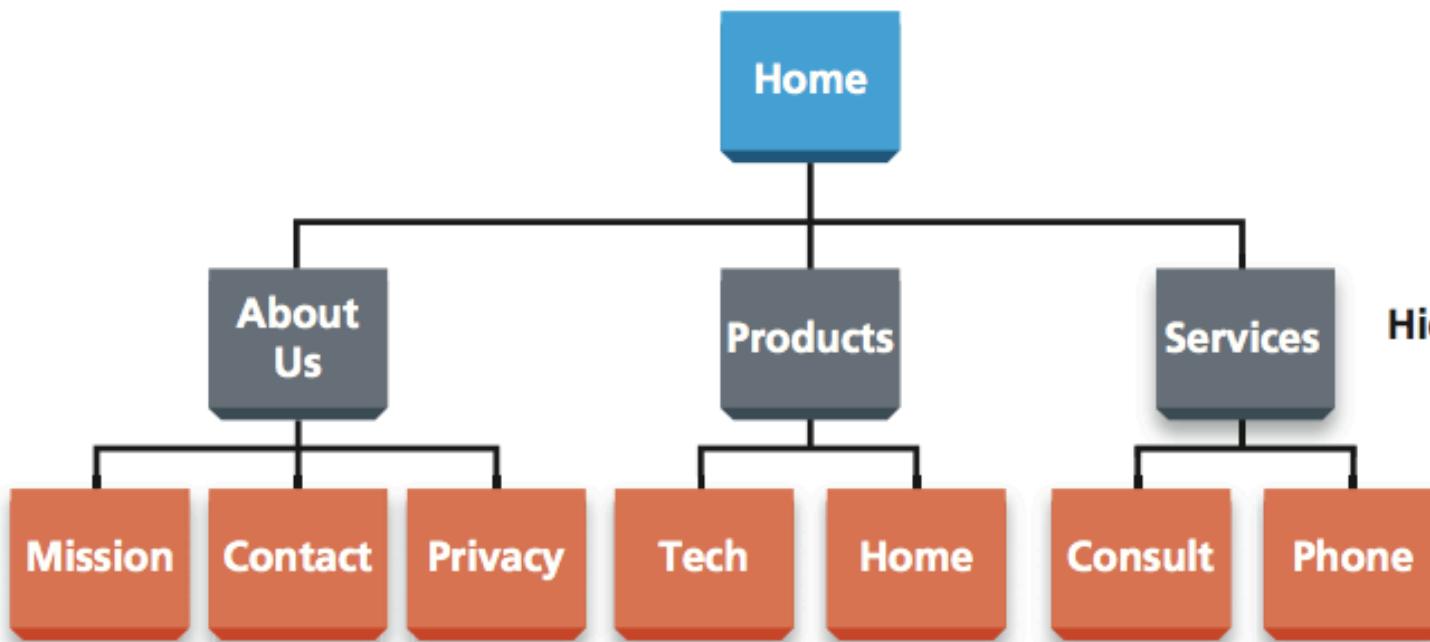
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WEBSITE INFORMATION ARCHITECTURE AND NAVIGATION

- Designers must find ways to
 - organize the information,
 - provide navigational tools, and
 - ensure visitors don't struggle to find what they are looking for and complete a transaction.



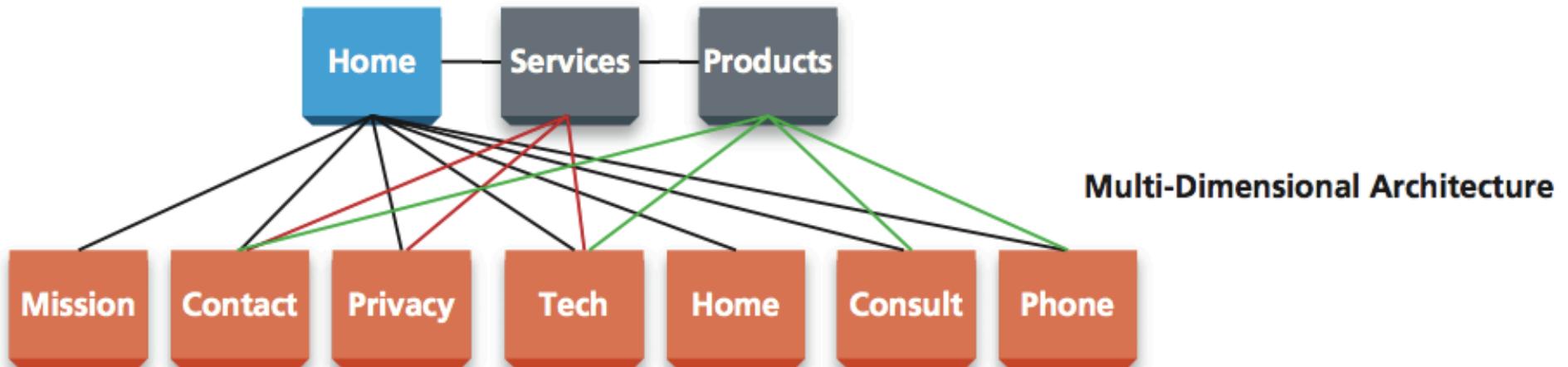
Flat Architecture



Hierarchical Architecture

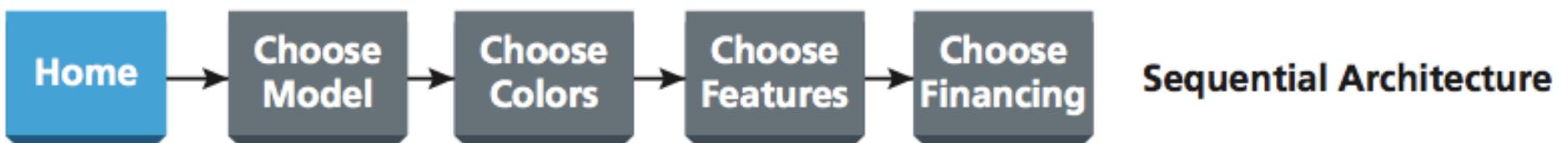
hierarchical website architecture

Website structure in which the top-level home page contains links to second-level pages, which then link to further relevant pages.



multidimensional website architecture

Website structure with multiple links to pages at all levels, allowing visitors multiple paths through the site.



sequential website architecture

Website structure that guides visitors step by step through a transaction, survey, or learning module.

USABILITY

- the ease with which a person can accomplish a goal using some tool, such as a website, a mobile phone, or a kiosk.
- relies partly on
 - clear information architecture, and
 - the user interface design



ELEMENTS OF USABILITY

- Ease of learning
- Efficiency
- Memorability
- Error rates
- Satisfaction level

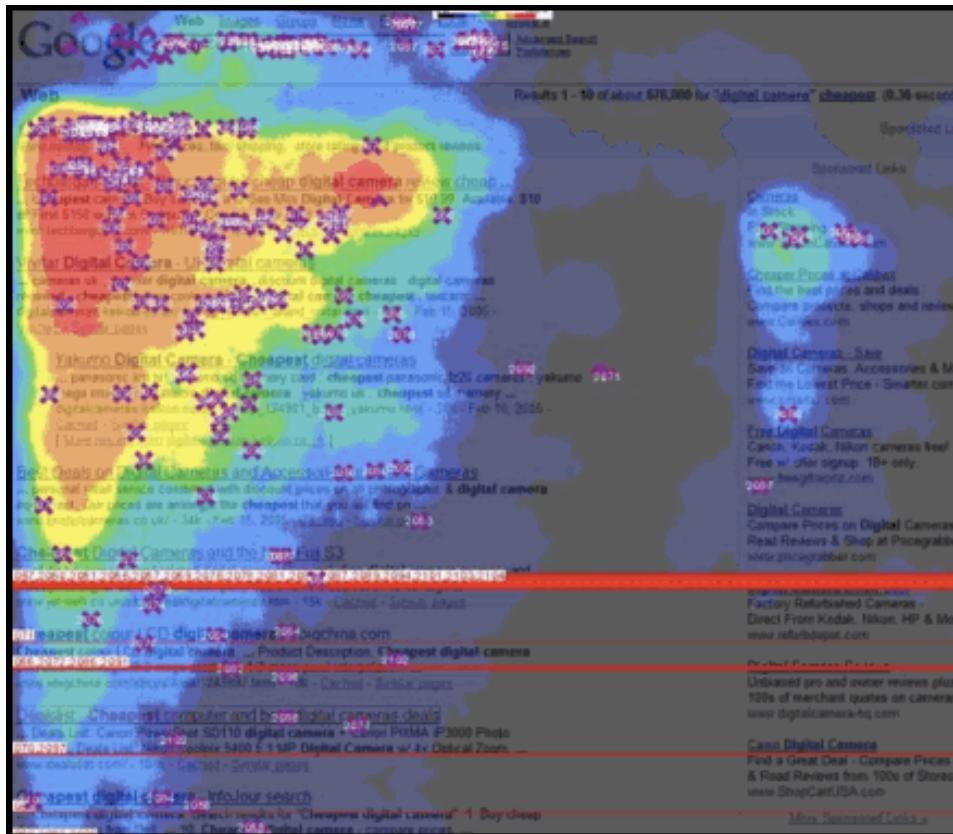
SAMPLE METRICS

Element	Sample Metrics
Ease of learning	To what extent can a user accomplish simple tasks on the first visit?
Efficiency	After learning the site's basic design, how quickly and efficiently can a user perform tasks?
Memorability	When a user returns to the site after a period of time, how much effort does it take to regain the same level of proficiency?
Error rates	How many mistakes do users make when they attempt to accomplish a task, and how easy is it to recover from those mistakes?
Satisfaction level	How do users rate their experiences on the site? Do they describe it as pleasant and satisfying, or frustrating?

USABILITY TESTS

- Ask visitors to perform a sequence of tasks and observe the problems they encounter
 - 5 will find 80% of errors, 15 most of them
- Ej. tasks related to library research:
 - Find a journal article on the death penalty.
 - Check whether the library is open on July 4.
 - Locate the most current issue of *Popular Mechanics*.

EYE- TRACKING



Ex[®] gentle for the
most sensitive skin.

Soothing for sensitive skin, add the chemicals and moisture
of regular diapers and you have diaper rash.

Baby Ex[®] diaper's unique high-absorbency natural-blend cotton
fiber provides cotton-soft, extra thick, gel-free protection
so you baby's sensitive skin. The chlorine-free materials and
water-soluble polymers is non-toxic and non-irritating. Clinically
tested and pediatrician recommended for babies with allergies
and sensitive skin.



If you are not satisfied with the baby leakage protection, you will get your money back. Read more about our leakfree guarantee at www.baby.com.

TIPS FOR EFFECTIVE USER INTERFACE DESIGN

- **Keep it structured.**
 - clear and consistent design that is easy for users to recognize throughout the site.
- **Keep it simple.**
 - Make the common tasks very simple to do, so users can accomplish them on the first try without frustration.
- **Keep users informed.**
 - Let users know in clear language when something on the website changes, or the user has completed an action.

TIPS FOR EFFECTIVE USER INTERFACE DESIGN

- Be forgiving of errors.
 - Let users easily undo their actions or return to previous states.
- Avoid distractions.
 - Especially when the user is engaged in a sequential task, avoid adding unnecessary links or options.

J. Nielsen is an authority

DIFFERENT BROWSERS

Web Browser	Market Share
Microsoft Internet Explorer	45%
Google Chrome	24%
Mozilla Firefox	19%
Apple Safari	10%
Other	2%

WORLD WIDE WEB CONSORTIUM (W3C)

- an international body that establishes and publishes standards for programming languages used to create software for the web.
 - strives to make sure the web continues to support communication and commerce for all people, regardless of their hardware, software, native languages, or geographic location.
 - avoid the fate in which the web fragments into islands that can't interact with one another
- Headed by Tim Berners-Lee, the inventor of the World Wide Web

STANDARDS

- HTML & HTML 5
- CSS
- SVG
- Ajax
- Semantic Web
- XML
- <https://www.w3.org/standards/>

CONTENT MANAGEMENT SYSTEMS (CMS)

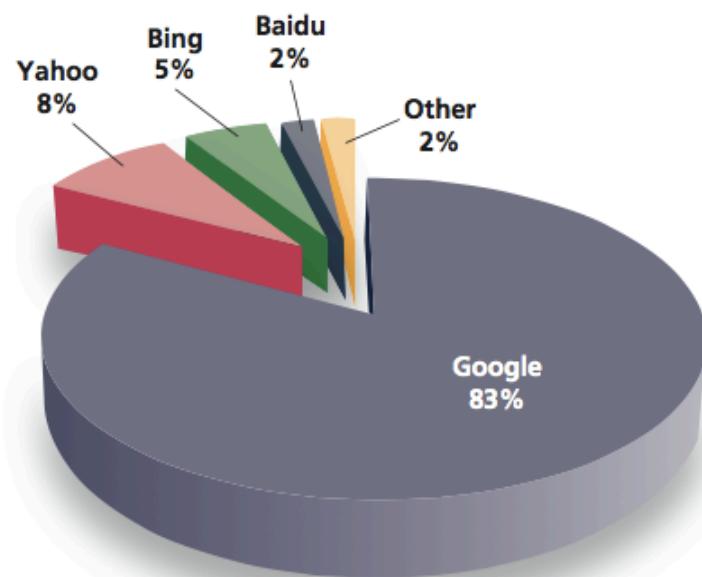
- Encompass a large group of software products that help manage digital content in collaborative environments.
- Web CMS supports website development and maintenance for larger teams
- Has a front-end that allows to add, modify or remove content

MARKETING THE WEBSITE

- **Search engine optimization (SEO)** uses strategies to increase the quantity and quality of traffic from search engines
- **Web advertising**
 - Pop-up ads, floating images, banners, music, animations
 - Cookies to personalize the site or track web activities.
 - Search-engine marketing
- **click-through rate (CTR):** number of visitors who click on the ad divided by the number of impressions
(for banner ads = .1%)

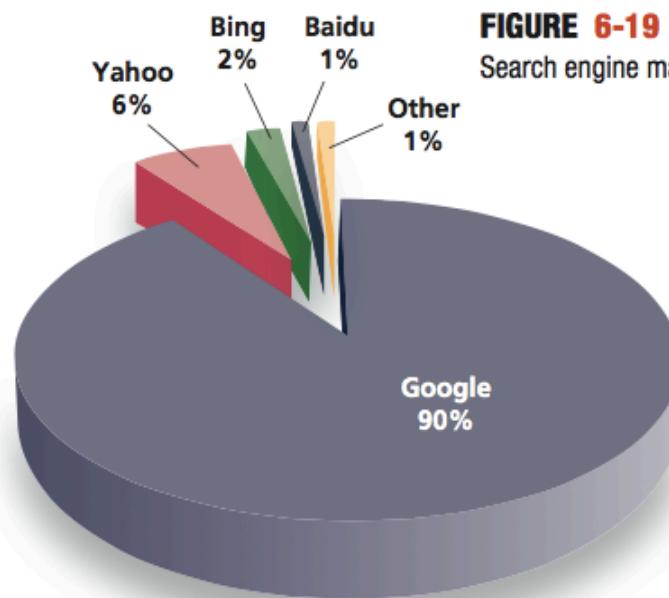
Challenges: Fraud
and privacy

SEARCH ENGINE MARKET SHARES



Desktop computers

Source: Data from www.netmarketshare.com, accessed February 3, 2013.



Mobile devices

ACCESIBILIDAD

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WEB ACCESSIBILITY

- how easily people with disabilities can access and use web resources.
- 20% of the US population has some disabilities
 - Impaired vision, hearing loss, limited motor skills, and other kinds of disabilities can hinder or even block people from using the web
 - The figure will grow as the population ages

WEB ACCESSIBILITY INITIATIVE (WAI)

- develops guidelines for web accessibility that are widely regarded as international standards (defined by W3C)
 - www.w3.org/WAI
- offers links to a variety of software tools that designers can use to check a site's accessibility against the guidelines
- most websites do not comply though
 - only a third of European government websites are fully accessible.

ASSISTIVE TECHNOLOGIES

- designed to help people with disabilities
 - Range from low- tech magnifying glass for the visually impaired to motorized wheelchairs.
- when using the web,
 - mouse foot pedals,
 - screen readers,
 - Braille displays,
 - head-mounted pointers,
 - joysticks, and
 - speech-to-text translators

DO

- Add alternative text tags for every image, so visually impaired people know what the image is.
- Use self-explanatory links (avoid “click here for more.”)
- Make bold headings, short paragraphs, and orderly paragraph arrangements, so screen readers follow the flow correctly.
- Create text-only alternative versions for devices such as tablets or mobile phones.

DON'T

- Use fixed text sizes, which may make it impossible for visually impaired people to use the site.
- Create very tiny clickable areas, which hinder those with limited mobility or motor function.
- Implement forms that require a mouse click, which prevents keyboard-only users from typing in their information.
- Use overly complicated designs with no simple alternative for browsing on a tablet or mobile phone.

E-COMMERCE

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E-COMMERCE

- refers to the buying and selling of goods and services over the Internet
 - financial transactions between businesses, consumers, governments, or nonprofits.
- Funcionalidades
 - **shopping cart software** (taxes, discounts, shipping)
 - secure web-based financial transactions
 - catalog of products using a back-end database
 - online marketing and sales promotions
 - manage the financial transactions
 - handle reporting

E-COMMERCE TRUSTWORTHINESS

- Online fraud cost as much as \$3.5 billion in 2012
- Security mechanisms
 - https:// protocol: transmission is encrypted and secure
 - payment gateway: transmission of credit or debit card data to/from the retailer's bank
- Trust building
 - Well-known brands
 - “seal of approval” from independent parties (TRUSTe)
 - Social commerce: online networks of recommendations

MOBILE DEVICES AND M-COMMERCE

- High adoption rate
 - 24 million – in Chile
- Mobile apps vs mobile-friendly websites
- M-Commerce (m-commerce)
 - refers to the use of wireless, mobile devices to conduct e-commerce.
- Mobile Payments
 - digital “wallets” actually pay bills on the spot, eliminating the need to carry cash
 - Standard: Near field communication (NFC)

WEB 2.0. AND BEYOND

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CROWDSOURCING AND COLLECTIVE INTELLIGENCE

- Google relies on everyone who clicks on links or embeds links.
- Amazon relies on product reviews & ratings
- Amazon's Mechanical Turk creates a market based on human wisdom
- Innocentive (www.innocentive.com) provides a platform for even higher payouts for innovative solutions to real problems.

INTERNET OF THINGS

- New sensors: RFID technology, smartphones, cameras, camcorders, GPS devices
 - New IP protocol
- Companies can achieve distinct competitive advantages when they manage to get control over valuable data collected by all these sensors, organize it into a database, and find ways to understand customers and create new products

THE LEARNING WEB

- The massive and ever-growing mounds of data are valuable not just in their own right, as revenue sources for companies or as features to attract more users.
- They also provide resources for machine learning, making the web and its applications ever smarter.