

# THE CHANGING WORLD AROUND US

# INFORMATION DELIVERY



### ALL TECHNOLOGIES WILL BE REPLACED BY SOMETHING NEW

Since the 1800s, formats for delivering technology continue to change rapidly:

- 1844 Telegraph
- 1876 Telephone
- 1877 Phonograph
- 1896 Radio
- 1935 Fax machine
- 1939 Television
- 1945 ENIAC Computer
- 1947 Transistor
- 1954 Color television
- 1961 Laser
- 1965 Email
- 1973 Cell phone
- 1974 Altair 8800
- 1989 World Wide Web

- 1990 Online Search Engine
- 1992 Web Browser
- 1994 Palm Pilot
- 1996 Google
- 1999 Blackberry
- 2000 GPS (personal use)
- 2002 iPod
- 2004 Facebook
- 2005 You Tube
- 2006 Twitter
- 2008 Apple iPhone 3G
- 2010 3D Television
- 2012 4G Networks
- 2016 4K Television

Source: The Future of Libraries: Beginning the Great Transformation, 8/6/2015

# **TECHNOLOGY**



### PERSONAL COMPUTING

- During the early 1980s, home computers were developed for household use.
- In 1982, KCLS installed two state-of-the-art Apple II Plus microcomputers one in Lake Hills and one in White Center.
- In 2001, 125 million personal computers were shipped (in comparison to 48,000 in 1977).
- Global personal computer shipments were 350.9 million units in 2010.

# **TECHNOLOGY**



### **THE WEB**

- In 1994, Netscape Navigator was released, which resulted in one of the early browser wars
   a competition it lost to Internet Explorer.
- During the first decade or so of the public internet, the immense changes it would eventually enable in the 2000s were still nascent.
- Laptops were bulky and most households did not have computers. Data rates were slow and media storage was transitioning slowly from analog tape to digital optical discs.
- In the 1990s, the Internet was widely used for mailing lists, emails, e-commerce and early online shopping, online forums and bulletin boards.
- By current standards, the systems were static and lacked widespread social engagement.
- Starting in 2004, changes began to propel the Internet to its place as a social system.

# **TECHNOLOGY**



### **MOBILE REVOLUTION**

- In 1999, a Japanese firm released the first smartphones, which became widespread in the 21st century.
- Most smartphones produced from 2012 onwards have high-speed mobile broadband, motion sensors and mobile payment features.
- In 2012, one billion smartphones were in use worldwide.
- By January 2016, smartphones held over 79% of the U.S. mobile market.
- Tablet computing became popular with the release of the iPad in 2010.
- By 2014, half of American adults had a dedicated device, either an e-reader or a tablet, compared to 30% owning such a device by the end of 2013.

# **ADAPTION OF FORMATS**



### TRANSITIONS IN MEDIA

- VHS tapes came on the market in the 1970s and peaked in the 1980s-1990s.
- Audiobooks on cassette were popular in the 1970s. Cassettes were 50% of the market in 2002 and began to be replaced by CDs in 2004. CD audiobooks peaked in 2008.
- DVDs started to take over in the early 2000s and became dominant by 2005.
- WebTV was pioneered between 1994 and 2004.
- Netflix launched in 1998 renting DVDs. By 2005 they were shipping 1 million DVDs per day.
- Streaming TV emerged from 2000 to 2005. YouTube started in 2005.
- In 2007, Netflix grew as it introduced video on demand. DVD sales fell from 2006-2011.
- Downloadable music also emerged in the early 2000s, with iTunes becoming a major player. By 2013, streaming audio services hit a record of 118.1 billion streams.

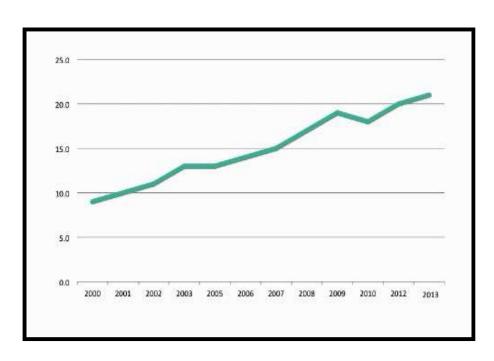


# CURRENT SOCIETAL TRENDS



### THE GROWING DIGITAL SPACE

- People are spending twice as much time online compared to 10 years ago.
- Time spent online among young adults almost tripled from 10 hours and 24 minutes each week in 2005 to 27 hours and 36 minutes in 2014.
- The average adult spends more than 20 hours online a week, which includes time spent on the Internet at work (up from 10 hours in 2000).
- The average person spends 2.5
  hours every week "online while on
  the move" (away from their home,
  work or place of study) from just
  30 minutes in 2005.



Source: Ofcom's Media Use and Attitudes 2015 report



### **TIME COMPRESSION**

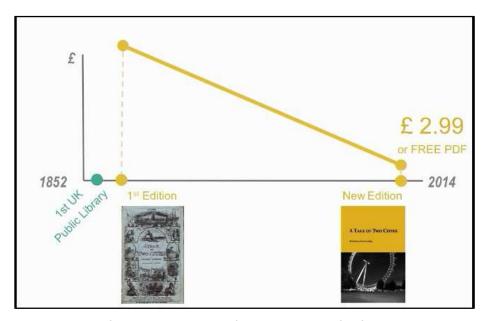
- People have more needs faster.
- People today sleep, on average, two hours less per night than 80 years ago, going from 8.9 hours per night to 6.9 hours.
- 34% of lunches today are eaten on the run.
- 66% of young people surf the web & watch TV at the same time.
- In a recent survey, 43% of the people in our society are having trouble making decisions because of sheer data overload.

Source: The Future of Libraries: Beginning the Great Transformation, 8/6/2015



### **VALUE OF FREE & THE PRICE OF OTHER GOODS**

- Free is no longer what it used to be.
- The opportunity cost of using a library has gone up relative to incomes and alternative sources.
- The cost to purchase books online and have them shipped to your door, or to subscribe to Netflix competes with the price of time and travel.
- The amount of free content online and digital content (i.e. YouTube, apps, etc.) continues to grow.



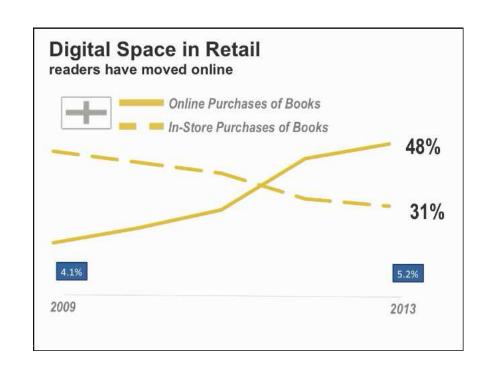
The value of borrowing a book from the library for free was much greater in 1852, when a book cost more than a week's salary!



### **ECONOMY & COMPETITION**

- Shifts in retail from in-store to online.
   For example, online purchases of books goes up 48% from 2009 to 2013, while in-store purchases goes down 31%.
- Transition underway from a productbased economy to an experience based economy.
- Social networking affects the way shoppers come to brands and products

   it is a key selling tool. Shopper reviews are generally considered more trustworthy than retail sales associates.
- Mobile technology has eliminated the need for shoppers to enter a bricks-andmortar environment, or to be at a computer.





### **USER STYLES & SERVICENEEDS**

- Libraries are now serving the broadest spectrum of customers in history, both demographically and generationally.
- The six generations that comprise 21<sup>st</sup> century library customers create significant differences in service demands.
- There is heavy demand on libraries to continue traditional library services for some patrons, while creating new technology-based services for others.

Digital Fugitive:	Digital Immigrant:	Digital Native:
Not a digital immigrant, 'patrons' to whom public libraries have virtually always catered.	Did not grow up with digital technology, but has learned to use it, and integrate it into their life as necessary.	Grew up learning digital technology, and has become dependant on it as an integral part of their life.
35 million + Great Generation, Silent Generation (66 and over)	45 million • GenX (47 and under), 60 million • Baby Boomers (65 and under)	75 million + Millennials (Geny) (29 and under) 25mill + Gen Z, I, Net (10 and under)



### **PUBLISHING TRENDS**

- Authors are getting more savvy about self-publishing (CreateSpace, Smashwords, Kindle Direct) and self-promoting (Twitter, Facebook, websites).
- Readers are aware of upcoming publications sometimes almost before the book is finished. The same is true of movies—where KCLS gets requests for films still in postproduction.
- Publishers are putting out more graphic novels and novellas (such as the "BookShots" series by James Patterson) than ever before. They are also including more sneak preview or "extra" content (such as an added short story) at the end of the regular story.
- There is less use of and demand for traditional reference titles (The Dictionary of ... and The Encyclopedia of ... ) so many have ceased publication.
- The same book is now in multiple formats (book, ebook, book on CD, eaudio, LP) and there is demand for each format, which places a lot of strain on the budget.





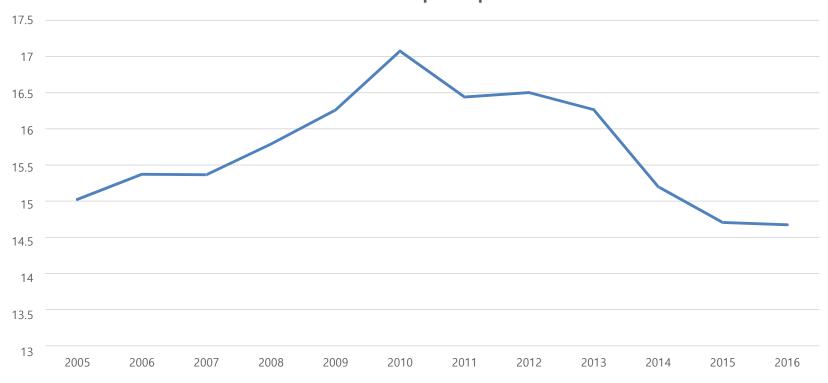
### **CIRCULATION TRENDS**

- Prior to 2002, use of the collection was growing. KCLS was making heavy investments in reference and more specialized materials.
- Beginning in 2002, KCLS began shifting its spending toward a more popular and community-based purchasing model. Choice Reads was developed, an MP3 player service launched and a slow shift to digital books beginning in 2003.
- In 2004, KCLS passes a bond measure. As the libraries begin to expand so do the collections and circulation, which peaks in 2010.
- Since 2010, square footage at KCLS continues to grow, while the budget for collections stays relatively flat and collection sizes shrink to accommodate other library uses.
  - Use of physical materials trending down
  - Use of digital materials trending up



## **USE OF KCLS COLLECTIONS**

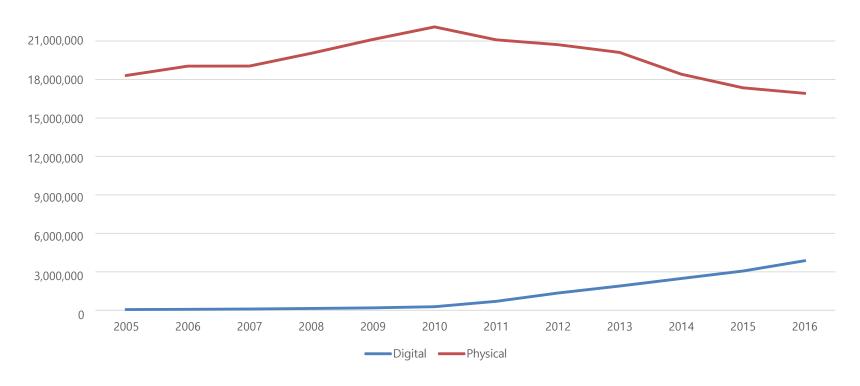






### **USE OF KCLS COLLECTIONS**

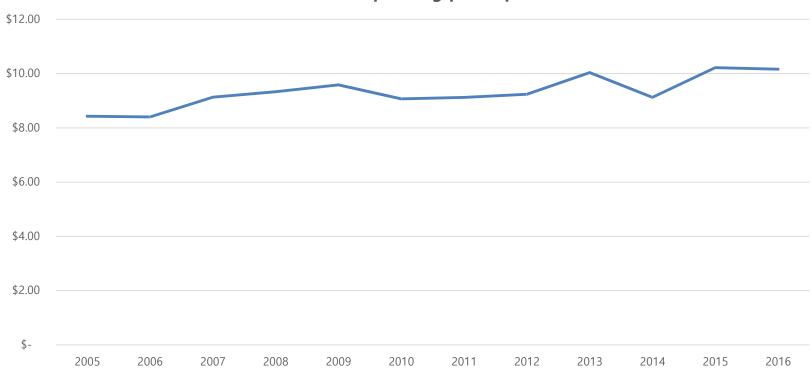
## **Use of Physical versus Digital Materials**





### **COLLECTION EXPENDITURES**

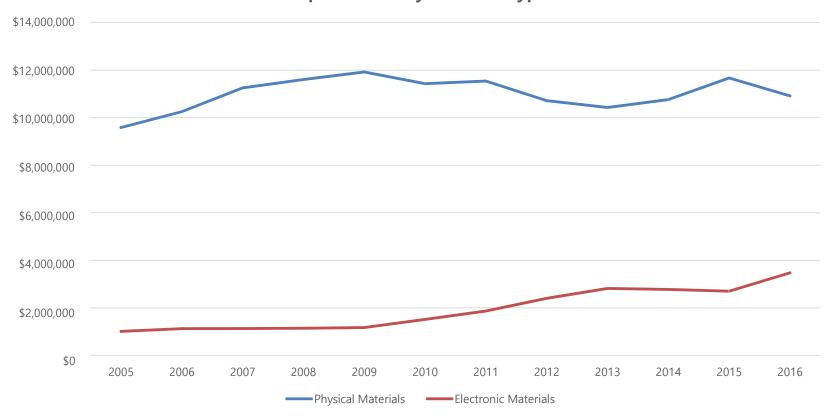






### SPENDING ON PHYSICAL VERSUS DIGITAL MATERIALS

## **Expenditures by Material Type**





# A STRATEGY FOR THE FUTURE