Technology Trends
What problem do you want to solve?

Presented by Kiefer Consulting, Inc.
Agenda

• Kiefer Consulting Overview
• What happened on July 1, 1898?
• 20 years of change
• A look ahead
• Your next step
Kiefer’s Core Business

**Collaboration Solutions**
- Public Websites
- Social & Collaboration
- Content & Document Management

**Productivity Solutions**
- Business Process Automation
- Workflow Solutions
- Forms Solutions
- Executive Dashboards
Over the last year, Kiefer has focused on these key areas.

We focus primarily on the **Modern Workplace** solution area.

Much of what we do focuses on leveraging technology to make things faster, easier and more convenient.
A talented team

Broad depth across the entire team

We’ve hired students right out of college.

Finalist: Best Places to Work 2017 (Sacramento Business Journal)
July 1st, 1898
Business Development
How did a stamp revolutionize the world?

• On July 1st, 1898 the US government create a 1 cent postcard stamp

• **Twitter was born. Postcards were the IM’s of the time period.**

• The Detroit Publishing Company was born.

• The company acquired exclusive rights to use a form of photography processing called Photochrom.

• The best-known photographer for the company was William Henry Jackson, who joined the company in 1897. He brought over 10,000 plates to help establish the industry.

• Their company folded in 1924 because of changes in printing technology. Failure to innovate.
Obsolescence

Your life time
What technology has expired recently?

• Faxes, CDs, Cassettes, film, e-mail you have to pay for, dial-up, 411, movie rental stores, standalone GPS, landline, pay phones, paper maps, buttons on devices, long distance charges, PDAs, VCR, phone books, dictionaries, encyclopedias, paper bills, losing touch (social media), alarm clock, records stores*

• What else?

*Business insider website
A Look Ahead

Near term trends
Content Marketing – A new type of buyer
Business Intelligence (Power BI)

We have made significant investments in helping clients gain insights from large volumes of data.

Data scientists are in demand.
Folsom Lake Data

We built this data visualization to show lake elevation over the last 25 years.

We wrote a blog on how we built this visualization. Check it out at kieferconsulting.com
What drives innovation?

- Economics?
- Something is no longer good enough?
- Changes in the operating system? Mobile applications are notorious for this.
- The need to solve problems that threaten us as a society.
- Curiosity?

*Inc Magazine July/Aug 2017*
Artificial Intelligence

• After decades of innovation, AI is finally becoming a critical component of our daily life.
  • Voice recognition that works
  • Convenience devices: Echo Dot, Nest, Google Home
  • Disease intelligence to augment doctors knowledge of medical issues. Accuracy of disease identification increases significantly

• Companies are funding innovation in AI: Samsung, Google, Amazon, Microsoft, Nvidia and VC companies

• Deep learning technologies: Cerebus building next gen chips, Visual recognition software being leveraged in nearly all types of mobility

• Cogito assesses others thoughts and feelings through nonverbal cues. Its ability to rank personal perception skills are better than humans. Used in hospitals, social workers and help desk situations. Reduces compassion fatigue in help desk workers. Burnout happens quickly.*

• Other applications include smart farming, medical robotics, human-machine resources (no more 1:1 reviews with management)*

*Inc Magazine July/Aug 2017
Robotics

• Robots that teach kids (Sphero)
• A Chinese firm called JD.com developed a robot that can sort 3,600 objects an hour in a warehouse. 4x faster and more accurately than a human.*
• China is planning to dominate the work in AI, autonomous vehicles, and IoT.*
• **Funac** and **Adept** are leading the charge in the U.S. in manufacturing*
• South Korea (LG & Samsung) are leading the world in deploying robots in manufacturing (531/10k) and the U.S. is only (176/10K)*
• Amazon’s goal is to develop near-humanless warehouses and shipping, eliminating 10,000+ jobs
• University of Oxford predicts that 47% of U.S. jobs will be lost to automation in the next 20 years
• The White House Council on Economic Advisors predicts 83% of workers make less than $20/hr will lose their jobs in the next 20 years to automation
• Are you willing to move outside the country to achieve your goal?

*Bloomberg Jan 2017*
CoBot

- **CoBot**: collaborative robot designed to work along humans. Mobile pharmacy and medication dispersant in hospitals.
- U.S. based **Savioke**

**The Relay: Service Robot**
Autonomous Vehicles

• Expect common use and affordability by 2040.
• You eventually won’t even own a car
• Check out Car Watch
• Trucking and shipping industry are already building autonomous technologies. YouTube 8 Future Trucks & Buses

You will most likely experience riding in an autonomous vehicle before 2030. https://www.vtpi.org/avip.pdf
By 2020,*

- Over 20.4 billion devices will be interconnected (8.7B in 2012)
- Potentially $3.7 trillion savings per year related efficiency & productivity improvements in factories (inventory control, digitized shop floors, augmented workers, shipments, drones, office atmosphere...)
- $470 billion annual revenue for vendors selling IoT

Amazon hopes to create a store without cashiers. Walk in, pick up what you want and walk out. Check your prime account as you unload groceries.

Drug transmission through wearable patches

What do you need to fix?

- Build a better transport layer to seamlessly connect all of these devices. Help define the standards to the secure exchange of information.

Do you have concerns about privacy?

*Inc Magazine July/Aug 2017
Machine Learning

• Primarily focused on securing corporate investments from hackers (cyber security).
• In 2016,
  • Google released a platform for machine learning called Tensorflow
  • Microsoft released a cloud based platform for machine learning
  • Amazon released three new machine learning services
  • Salesforce and Oracle are investing as well to improve the user experience, metrics, trends...

• Since the world’s data doubles nearly every two years, machine learning will continue expanding.
• Recommendation systems that can predict a person’s interest in an item.
• Deloitte predicts that over 300 million smartphones sold in 2017 will have machine learning capabilities built in. +cars, tablets, drones, AR/VR, medical tools...
Mobile Applications & Wearables

• There is no end in site. Keep building apps and they will come.

• How do you monetize them though?

• Would it be cheaper to become a YouTube star and make millions per year? Most stars are under 30.
Major companies are investing in AR/VR: Microsoft, Facebook, Qualcomm, Lenovo, Ricoh Theta, Intel…

The movie industry is investing millions in AR high-definition video content

Obviously the gaming industry will benefit

Smart glasses are back
  • Cogito

What does this mean to you as a graduating student?
The list is endless

• Create something to solve a problem.
  • Thermacell – Backpack mosquito repeller
• Alibaba
  • Jack Ma provides the world with direct access to 100,000+ suppliers
  • Read the Hot, Flat and Crowded by Friedman
• Genetic Engineering
• 3D printing (Check out NASA’s new space fabric)
• 3D printed organs (Organovo)
• Digital Postcards that actually get mailed. Are we in an infinite loop?
• Apple pencil. Is this really better?
Alternative Energy

• Want to solve the energy dilemma using solar and lithium-ion batteries? Be ready to negotiate with other countries.

• What is your role in this?
Your Next Step

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Self Assessment

• What problem do you want to solve?
• What are your strengths?
• Which experience do you need to apply for the job that you want?
• Where do you want to live?
• How can you afford to achieve your dream?
Last Thoughts

• Your possibilities for participating in this era of accelerated innovation are limitless.
• Choose a career that you are passionate about
• Don’t be afraid
• Communication is critical
• At Kiefer Consulting, we offer a flexible work schedule, work life balance environment, collaborative hard working environment, access to the latest technologies from Microsoft, a rewarding experience, we solve problems for our customers
Everyone of you have a chance to change the world.

What will you choose to do?