

# SPEAK VISUALLY:

HOW TO USE VISUAL COMMUNICATION TO TELL  
YOUR RESEARCH STORY





# AMY BALLIETT

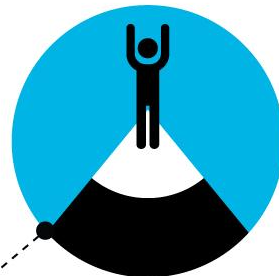
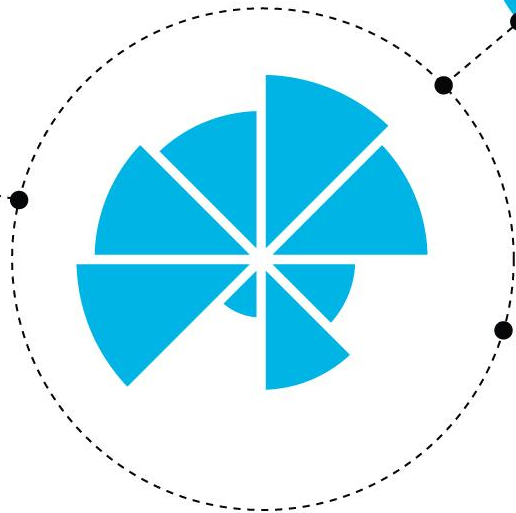
Killer Infographics

*CEO & Chief Swiss Army Knife*

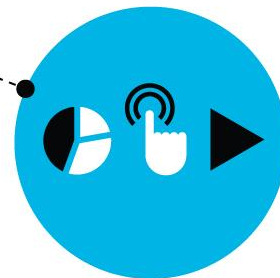
[amy@killerinfographics.com](mailto:amy@killerinfographics.com)



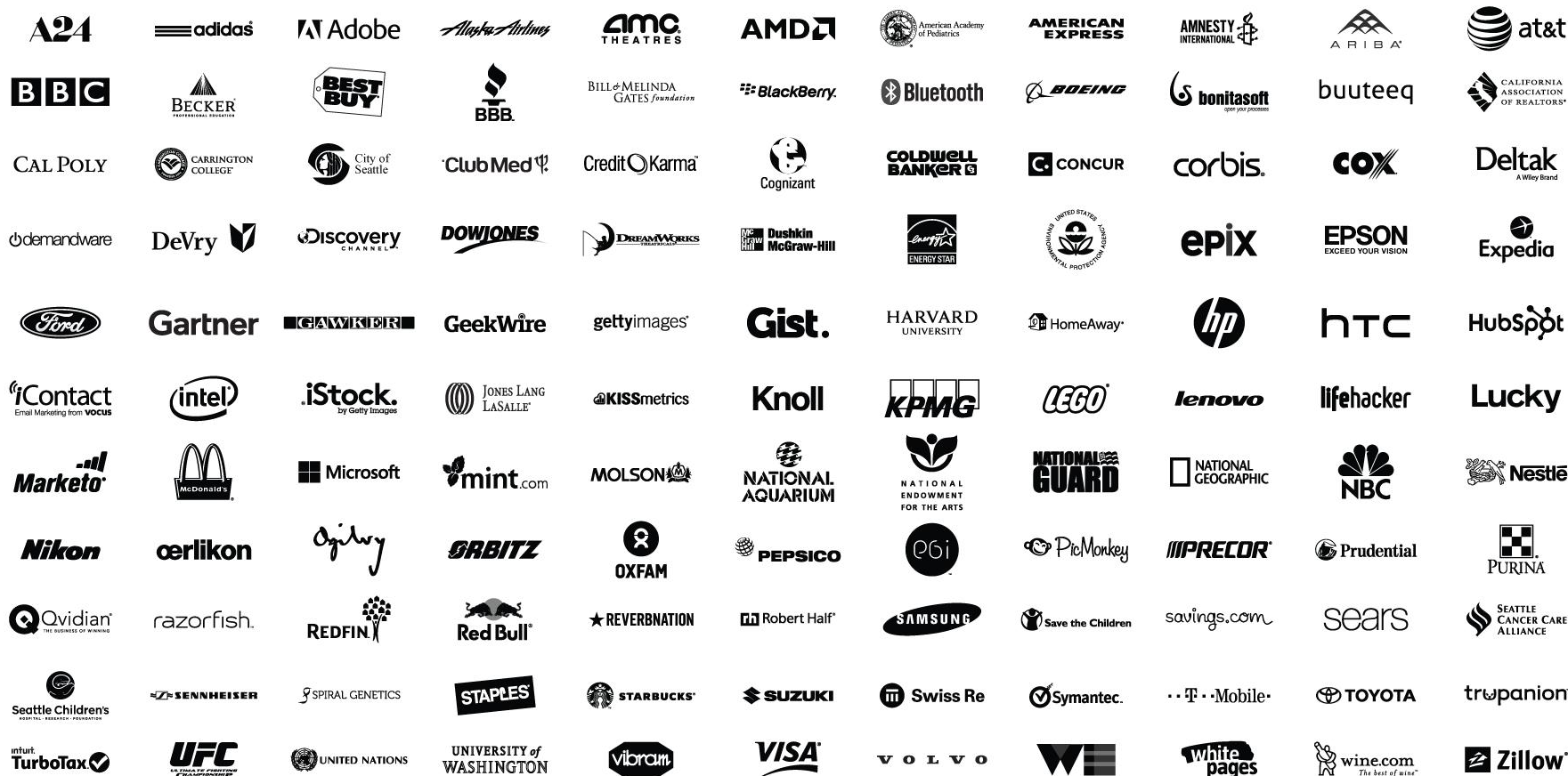
Our company is 6 years old



We are one of the leading  
visual communication  
agencies in the world



Core offerings include  
static infographics,  
interactives, and motion  
graphics



# PART I:

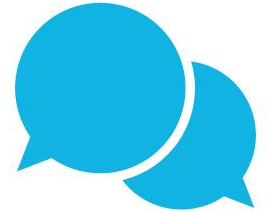
WHAT IS VISUAL COMMUNICATION &  
WHY DOES IT MATTER?

# **VISUAL COMMUNICATION**

graphically represents information to efficiently and effectively create meaning.

When necessary, limited text is included to explicate the meaning.

**MORE THAN**  **84%** **OF COMMUNICATION WILL  
BE VISUAL BY 2018**





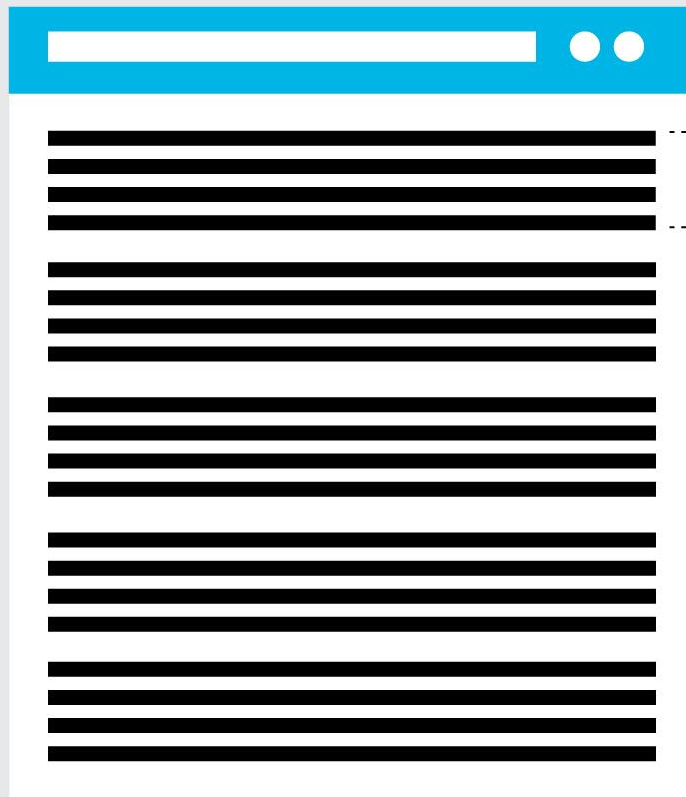
On average, press releases with visuals receive

**77% MORE VISITORS**

than those without







On average, users  
read just

20%

of the content on a  
web page with more  
than 600 words of  
text.



Visual information gets to the brain

**60,000 TIMES FASTER**

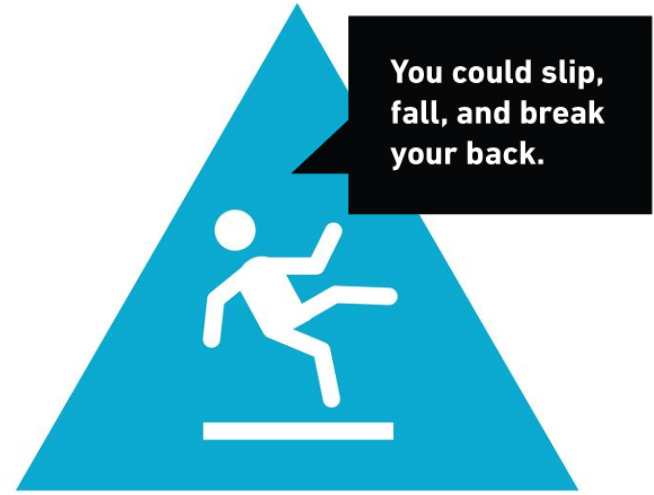
than text



**90%**

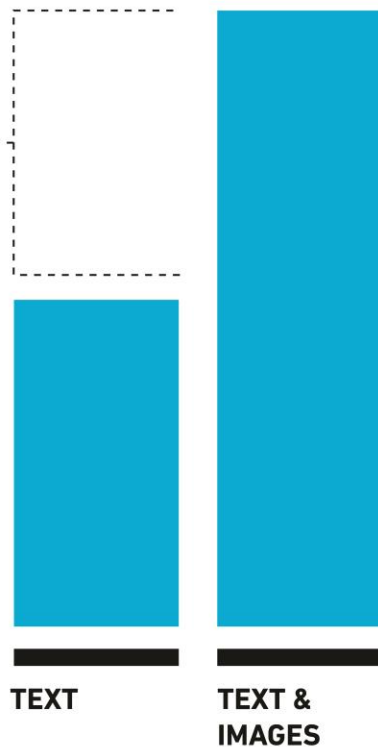
of information transmitted to  
the brain is visual

# VISUALS COMMUNICATE INFORMATION FASTER THAN WORDS



Text paired with images improves  
comprehension by

89%



D-O-G

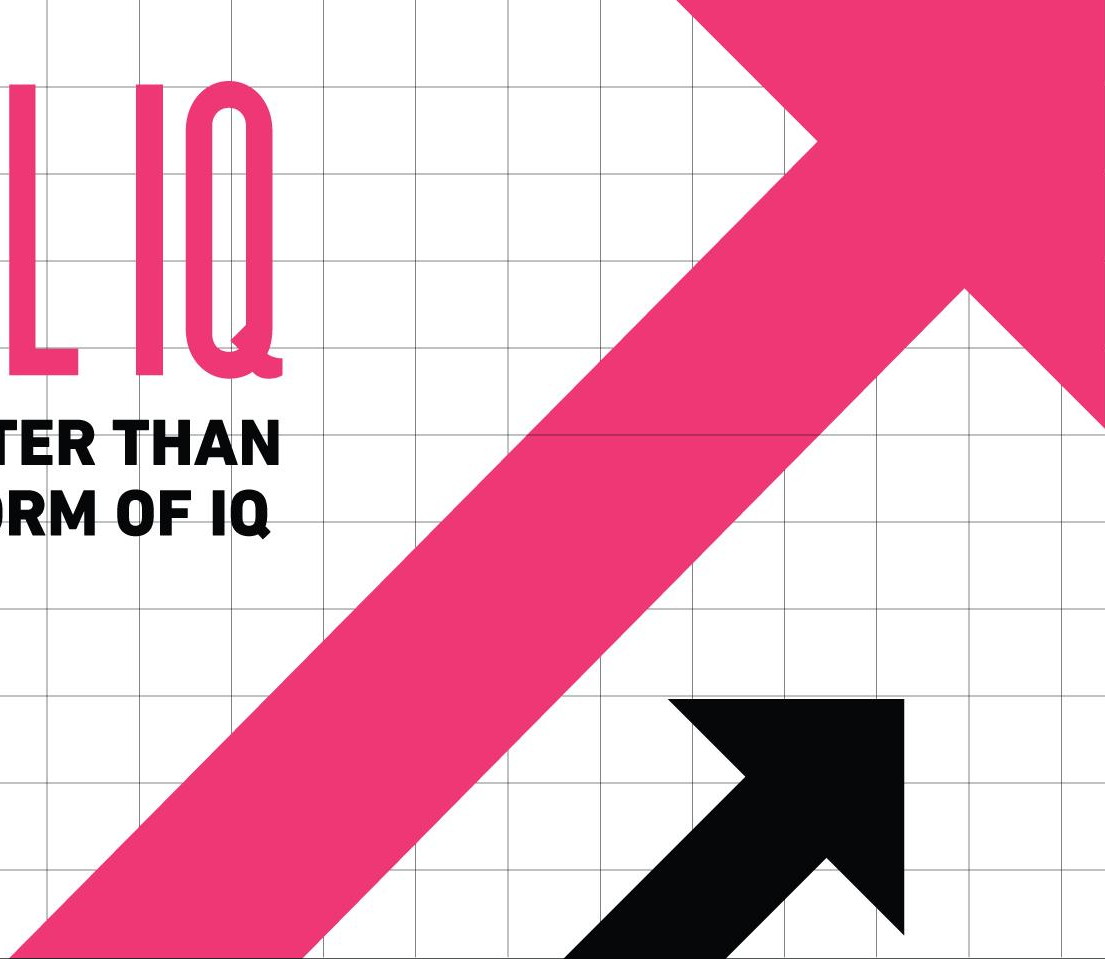


# PART 2:

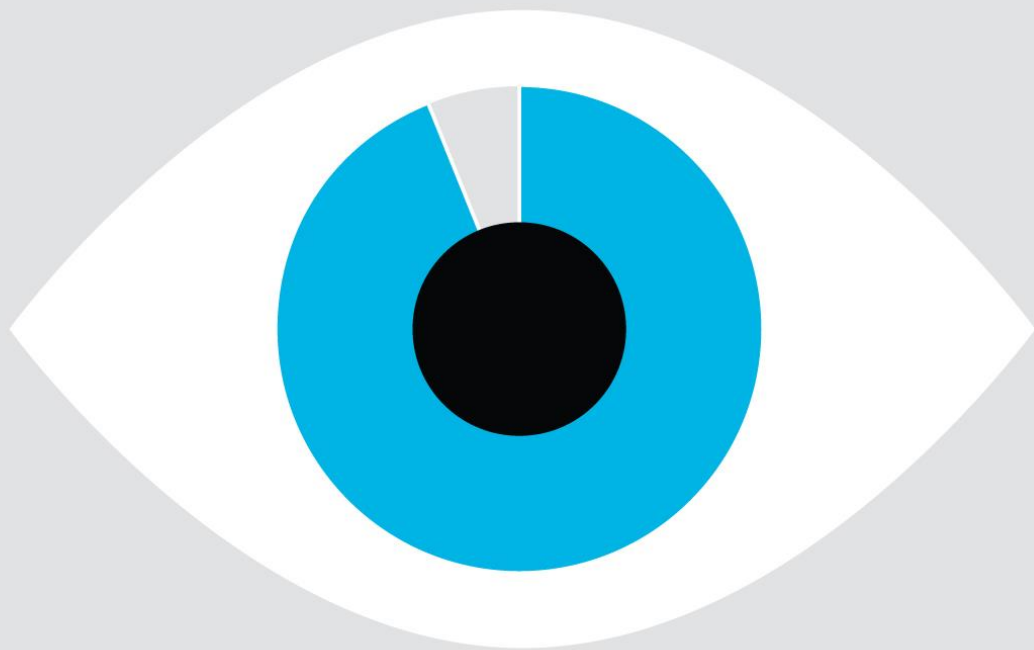
QUALITY EXECUTION IS KEY

# VISUAL IQ

**IS RISING FASTER THAN  
ANY OTHER FORM OF IQ**

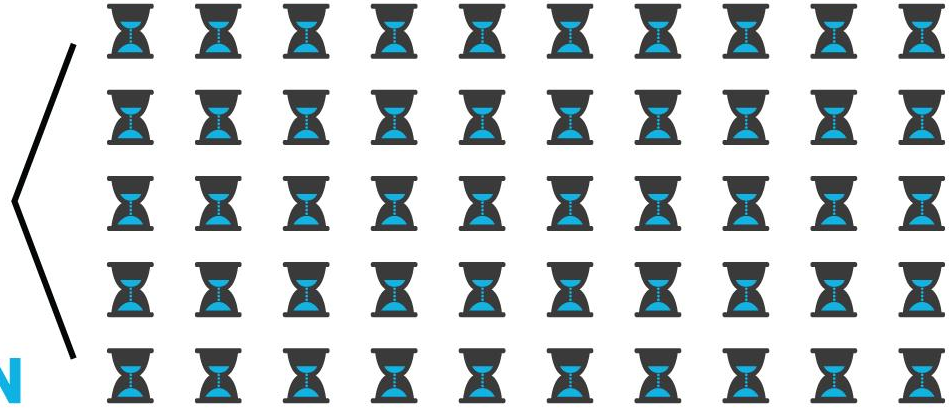






First impressions are **94%** based on design

IT TAKES LESS THAN  
**50 MILLISECONDS**  
TO FORM A FIRST IMPRESSION



# The History of E-commerce

Brought to you by ZippyCart.com

1979: Michael Aldrich invents online shopping. Born in 1941, Aldrich developed a predecessor of online shopping to allow for electronic bill & utility transactions.

1980: Thomson Holidays submits the first ever B2B electronic transaction using online technology.

1983: France Telecom invents Minitel. Considered the world's most successful pre-World Wide Web online service, users could make online purchases, rent reservations, and more through a dedicated online service, accessible through telephone lines.

1984: Jane Snowball (Age 72) - One of the earliest and oldest first online home shoppers.

1987: First Electronic Merchant Account: Using the Gateway and Visa account to let software developers set online.

1990: Tim Berners-Lee writes the first web browser using a NeXT computer, thus creating the World Wide Web.

1991: The National Science Foundation (NSF) lifts restrictions on the commercial use of the NET, clearing the way for e-commerce.

1992: Netscape Navigator releases. SSL encryption becomes a reality, making online purchases safer. Places that had no Internet access, a preference for the Internet, and the first selling online.

1993: Amazon.com. The first e-commerce website. The first e-commerce website to offer a wide range of products.

1994: eBay. The first e-commerce website to offer a wide range of products.

1995: Google. The first e-commerce website to offer a wide range of products.

1996: The Dot-Com Bubble. The first e-commerce website to offer a wide range of products.

1997: Microsoft. The first e-commerce website to offer a wide range of products.

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2011: Microsoft. The first e-commerce website to offer a wide range of products.

2012: Microsoft. The first e-commerce website to offer a wide range of products.

2013: Microsoft. The first e-commerce website to offer a wide range of products.

2014: Microsoft. The first e-commerce website to offer a wide range of products.

2015: Microsoft. The first e-commerce website to offer a wide range of products.

2016: Microsoft. The first e-commerce website to offer a wide range of products.

2017: Microsoft. The first e-commerce website to offer a wide range of products.

2018: Microsoft. The first e-commerce website to offer a wide range of products.

2019: Microsoft. The first e-commerce website to offer a wide range of products.

2020: Microsoft. The first e-commerce website to offer a wide range of products.

E-commerce Continues to Evolve

Mobile Commerce: Group Buying, Private Sales, Social Commerce.

# Understanding Google PageRank...

**KEY**

- Blue figures** = Sites like you
- Purple figure** = The high school principal = .edu websites
- Red figures** = The jocks and cheerleaders = PR 5 or higher
- Pink figures** = The followers = PR 4 sites
- Green figures** = The drama crowd = PR 2-3 sites
- Yellow figures** = The marching band = PR 0-1 sites
- Grey figures** = The outcasts = Spam sites

**PageRank is a Popularity Contest Like Running for Prom King**

**PageRank Requires The Right Votes**

Consider who links to you because links are two votes. If your main votes for the Prom King come from the marching band and the drama club, you won't win the crown. Similarly, links from low PR sites hold less clout for Google.

**The Right Votes Lead to Many Followers**

Consider who links to you because links are two votes. If your main votes for the Prom King come from the marching band and the drama club, you won't win the crown. Similarly, links from low PR sites hold less clout for Google.

**PageRank Takes Into Account Who is Voting for You**

If the principal wants you to win, then maybe he'll fix the results in your favor. Google trusts authority websites, like those that end in .edu or .gov more than .com. The more links you get from some of these sites, the better.

**How People Vote for You Can Affect Your Overall Score**

Sometimes, students can vote for multiple people at once from sites similar to you that from sites not like you. Why? If your friends won't even vote for you to be Prom King, then why should others?

**If You Vote for Me & I Vote for You, Our Votes Cancel Each Other Out**

Someone running for Prom King might be tempted to promise a friend that he'll vote for them if they vote for him. In the end though, those two votes just canceled each other out. Similarly, Google notices when you trade links, and even with Sway-link exchanges, they tend to cancel those links out.

**Achieving The Best & Most Votes, Will Lead to Success**

In the end, the most votes will get you the crown, but the best votes are what lead the way. If you get high PR sites linking to you, they will always be more valuable than a large number of links from low PR sites. This is because, like a popularity contest, you always need the popular people on your side first.

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# 1969 Moonwalking: Then and now

With six successful moon landings, the Apollo program captured the world's imagination. By 2020, the Constellation program will try to pick up where Apollo left off, if budgetary concerns don't derail it first.

## GETTING THERE

The launch and landing vehicles would be different, but the method for getting astronauts to the moon and back remained the same. A typical mission profile:

- Trans-Earth coast**
  - After injection burn, ship coasts back to Earth. In-route navigation corrections are performed.
- Splashdown**
  - Spacecraft decelerates and falls into Earth's gravity field. Craft re-enters atmosphere and lands in ocean, with aid of parachutes.
- Launch**
  - There are only three Saturn V rockets left in the world. The one on display at Johnson Space Center in Houston is the only one made up of eight ready components.
- Translunar coast**
  - Spacecraft leaves Earth orbit with a final burn; coasts distance to moon (238,857 miles) for 73 hours. In-route trajectory corrections are made during this time.
- Lunar orbit/landing**
  - Lander travels to surface while orbiter waits in orbit.
- Lunar orbit insertion**
  - Ship performs burn to slow its speed; enters moon orbit.
- Crew vehicles compared**
  - Constellation's Orion spaceship is basically an updated and oversized version of the Apollo program command and service modules. Orion can carry up to six astronauts instead of three.

## APOLLO LANDINGS

- Lunar module**
  - The descent stage featured landing gear and carried equipment for moonwalk activities; the ascent stage was a pressurized crew cabin equipped with systems for return to lunar orbit.
- Command/service module**
  - Composed of two segments: a command module, which carried crew and equipment needed to reach lunar orbit and return to Earth, and a service module that provided propulsion and power.
- Proof we were there**
  - Suitcase-sized mirrors left by Apollo missions allow earthbound astronomers to bounce lasers off the lunar surface to measure moon's distance and movement with amazing accuracy.

## CONSTELLATION LANDINGS

- Lunar truck**
  - Still in design stage by NASA; will have a pressurized cabin and be able to transport astronauts on extended missions thousands of miles from base.
- Lunar rover**
  - First sent to the moon in 1971 with Apollo 15.
- Orion spacecraft**
  - Currently in development, Orion will have different configurations depending on the mission.
- Altair lander**
  - Almost five times larger than Apollo's lunar module, Altair will be capable of transporting entire crew to surface of moon; Orion would be unmanned while orbiting moon.

## TRIUMPH AND TRAGEDY

Milestones in NASA's manned spaceflight program:

- May 1961:** President John F. Kennedy announces goal of landing man on moon by end of decade.
- Jan. 1967:** Gus Grissom, Ed White and Roger Chaffin die in fire during launch pad test.
- July 1968:** Apollo 11 is first of six missions to moon; Neil Armstrong and Edwin "Buzz" Aldrin first men to walk on the moon.
- Jan. 1969:** President Ronald Reagan announces plan to build space station within 10 years.
- Nov. 1998:** Construction begins on international space station.
- Jan. 2004:** President George W. Bush unveils new vision for space exploration, including a return to moon by 2020.
- Feb. 2002:** Shuttle Challenger disintegrates 73 seconds after liftoff; crew of seven lost.
- Feb. 2003:** Shuttle Columbia breaks up 15 minutes before landing; crew of seven lost.
- 2010:** Final shuttle flight planned.
- 2014:** First manned flight of Orion capsule.
- 2020:** First lunar landing of the Constellation program, more planned after that.

**Manned missions**

- Mercury
- Apollo
- Shuttle
- Constellation

Sources: NASA; Lockheed Martin Corp.; McClatchy-Tribune

ALBERTO CUADRA, JAY CARP • CHRONICLE

# THOUGHTS?

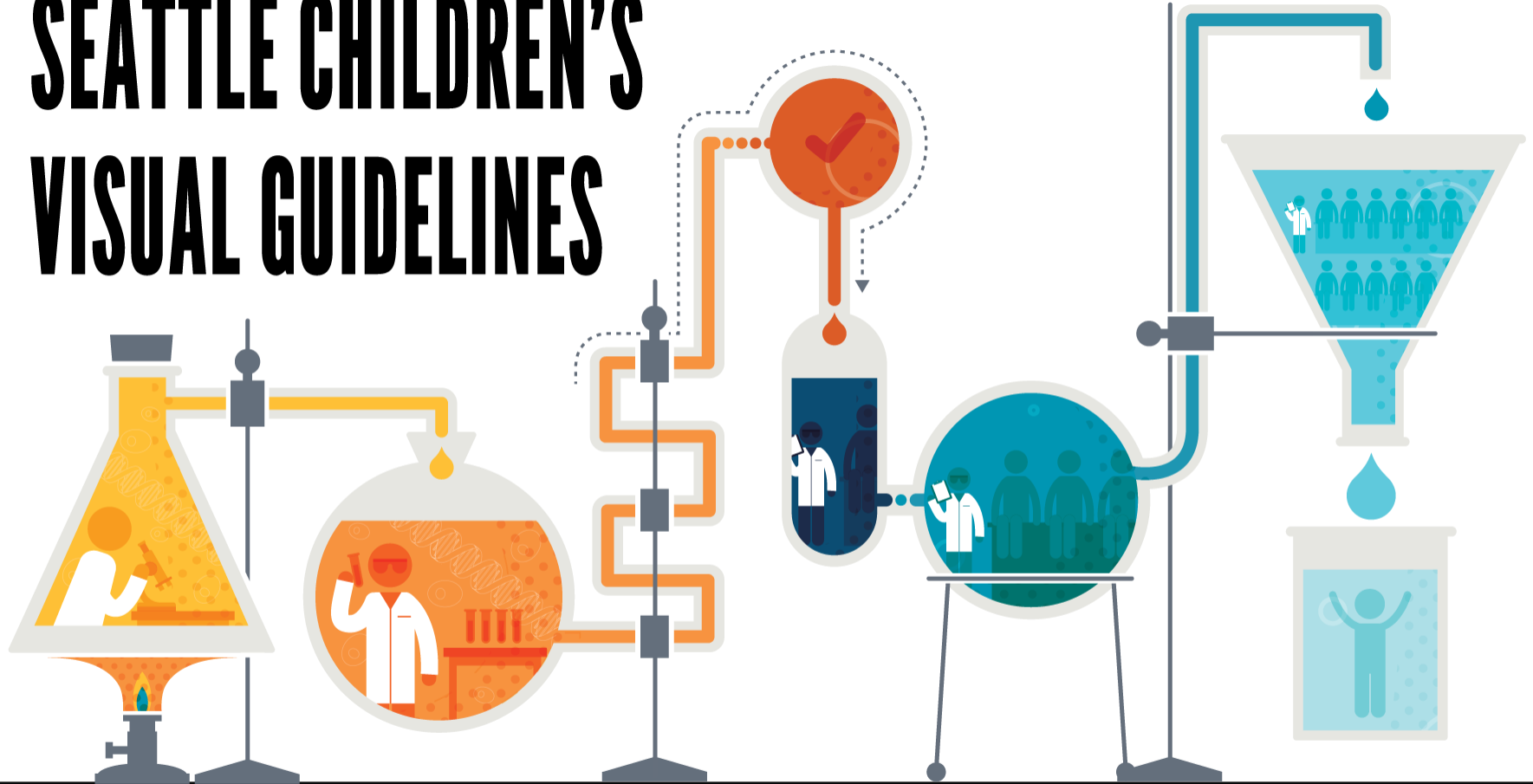




# PART 3:

A PROCESS THAT WORKS FOR ANY BUDGET

# SEATTLE CHILDREN'S VISUAL GUIDELINES





# A Cure in the Lab Is Not Enough

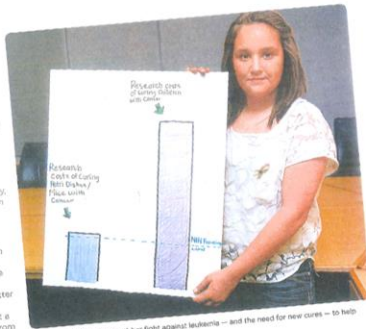
You can help bring research breakthroughs from the bench to the bedside.

Research starts at the bedside, where Seattle Children's clinicians see opportunities to improve patient care every day. They carry those needs to the laboratory bench at Seattle Children's Research Institute, where scientists uncover breakthroughs that have the potential to become cures. What comes next in the research life cycle is clinical and translational research that moves a scientific discovery into a new way of treating patients. Having research through each phase of its life cycle requires collaboration, talent and a lot of money, most of which comes from grants from the federal government.

## The high cost of cures

Clinical and translational research can cost more than other phases of the research life cycle, because it's where promising treatments are tested to see sure that they are safe and better than current options. For a clinical trial to get approved — funding from federal study approved — funding from additional sources like the government or drug companies doesn't match the need. It's also rarely covered by a patient's insurance.

This and funding gap between a breakthrough and testing its real-world application is so profound that researchers refer to it as the "valley of death." If funds aren't found to move a research forward, a potential cure is languish in the valley. "Traversing the valley of death is one of the most difficult things to do in biomedicine," says Dr. Andy



Natalie Smith, 12, talks about her fight against leukemia — and the need for new cures — to help raise money for research at Seattle Children's.

Schwarzenberg, a Children's investigator whose research is now tottering on this precipice. (You can read more about his work to treat leukemia by fixing the genes involved on page 12.)

## You can help

As our research institute has matured, we have more and more investigators ready to translate their discoveries to

new treatments for kids — and we need your help.

Philanthropic support — in any amount — provides essential funding along the research life cycle. You can bring us one step closer to providing healthier futures for children throughout the world. Learn more by contacting Brenda Hajejan at 206-987-4970 or [brenda.hajejan@seattlechildrens.org](mailto:brenda.hajejan@seattlechildrens.org).

Trail 2012 Connection

## The Research Life Cycle for Seattle Children's

Advances in all areas of science provide exciting developments for healthcare practice. So, how do lightbulb ideas get explored and reach real people? The research life cycle begins when doctors ask questions about how to improve treatments for their patients. For example, how can cancer treatments cause fewer side effects? Is there a way to safely fix a genetic mutation? Cash flow and people willing to participate are crucial to keep the cycle in motion. Here's how researchers turn possibilities into better realities for patients and their families:

### Laboratory Study

In the lab, researchers consider and develop ideas. They:

- Ask a question
- Share thoughts, develop an idea, and get research funding
  - [Visual warning sign]: Research can't begin without funding
  - Test the idea until results are consistent
    - [Visual warning sign]: Funding needed between testing stages

### Clinical Research Study Preparation

The preparation period transitions research from the lab to a controlled environment that includes people. Researchers:

- Confirm that lab research answered the study question
- Seek funding
  - Grant applications from organizations
  - Donations from community members
  - [Visual warning sign]: Funding needed for clinical study to proceed

### Clinical Research Study

Carefully planned studies test whether the new idea actually helps people. Volunteers participate so researchers can identify how well treatments work and that they are safe.

- Phase 1
  - Small group of volunteers
  - Examines safety and side effects
  - [Visual warning sign]: People needed for phase to be completed
- Phase 2
  - Medium-size group of volunteers
  - [Visual warning sign]: Without enough people, study can't continue
  - Examines effectiveness
- Phase 3
  - Large group of volunteers
  - [Visual warning sign]: Without enough people, study can't continue
  - Examines effectiveness and consistency
- Phase 4
  - [Visual warning sign]: FDA approval required for phase to proceed
  - Largest group of people
  - Examines long-term benefits and risks

Throughout research and healthcare processes, scientists and doctors learn from experiments, discoveries, and care. New questions are generated, which become the topics of new studies!



## The Research Life Cycle for Seattle Children's

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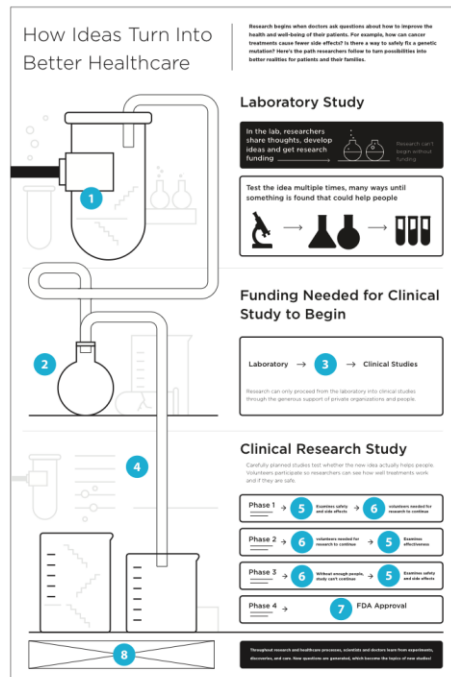
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## ABOUT THIS WIREFRAME

This wireframe shows the intended direction and layout for the data visualization, color palette, fonts, and illustration style (if applicable) as chosen by the designer. Please review the wireframe and content thoroughly with all stakeholders before completing the feedback form.

Any deviations from the approved wireframe can result in extensive edits and may delay delivery dates.

► DIMENSIONS: 24x36 inches



## LAYOUT PAGE 1 OF 1

### ► MAIN POINTS:

High-level explanations of Seattle Children's Research

### ► GRAPHICS KEY:

Items listed here correlate to the numbers shown on the layout, to the left. Please reference this list for descriptions of all the numbered items in the layout.

1. Illustration of doctors doing lab research inside of a test tube
2. Illustration of empty vials and test tubes
3. Illustration of bills and coins
4. Illustration of lab equipment with small scale researchers inside of vials and test tubes
5. Clipboard icon
6. Illustration/icon of a volunteer. More people will be added at each iteration of the icon.
7. Illustration/icon of a badge
8. Illustration of researchers

## The Research Life Cycle for Seattle Children's

Advances in all areas of science provide exciting new lightbulb ideas get explored and reach researchers. Doctors ask questions about how to improve cancer treatments, cause fewer side effects? Cash flow and people willing to participate are researchers turn possibilities into better reality.

### Laboratory Study

In the lab, researchers consider and develop ideas.

- Ask a question
- Share thoughts, develop an idea
  - [Visual warning sign]: Researcher
  - Test the idea until result
  - [Visual warning sign]

### Clinical Research Study Preparation

The preparation period transitions research from the lab to the clinic. Researchers:

- Confirm that lab research answers the question
- Seek funding
  - Grant applications from
  - Donations from community
  - [Visual warning sign]: Funding

### Clinical Research Study

Carefully planned studies test whether the new idea actually helps people. Researchers participate so researchers can identify how well the new idea works.

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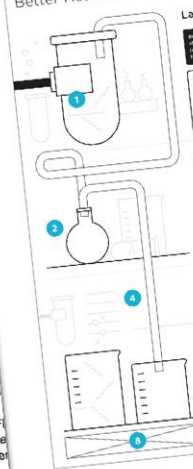
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DIMENSIONS: 24x36 inches

## How Ideas Turn Into Better Healthcare



### Laboratory Study

In the lab, researchers ask questions, develop ideas, and test them. They use equipment like flasks, test tubes, and pipettes to conduct experiments.

Test the idea multiple times, many ways until something is found that could help people.

1. Illustration of doctors doing lab research inside of a test tube.

2. Illustration of empty vials and test tubes.

3. Illustration of bills and coins.

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## How Ideas Turn Into Better Healthcare



Research begins when doctors ask questions about how to improve the health and well-being of their patients. For example, how can cancer treatments cause fewer side effects? Is there a way to safely fix a genetic mutation? Here's the path researchers follow to turn possibilities into better realities for patients and their families.

### 1. Laboratory Study

In the lab, researchers share thoughts, develop ideas and test them. They use equipment like flasks, test tubes, and pipettes to conduct experiments.

Test the idea multiple times, many ways until something is found that could help people.



### 2. Funding Needed for Clinical Study to Begin

Laboratory → Clinical Studies

Research can only proceed from the laboratory into clinical studies through the generous support of private organizations and people.

### 3. Clinical Research Study

Carefully planned studies test whether the new idea actually helps people. Patients volunteer to participate so researchers can see how well treatments work and if they are safe.

Phase 1  
Small group of volunteers  
Examines safety and side effects  
Volunteers needed for research to continue

Phase 2  
Medium group of volunteers  
Examines effectiveness  
Volunteers needed for research to continue

Phase 3  
Large group of volunteers  
Examines safety and side effects  
Without enough people, study can't continue

Phase 4  
FDA approves new therapy for kids

While research studies are designed to answer questions, they also generate new questions that spur new rounds of research for scientists and doctors.



## By the Numbers Seattle Children's Hospital

The only pediatric mobile ECG program on the West Coast. We can travel and transport patients within

3,000 miles



Over  
**600**  
heart surgeries  
performed  
each year

Dedicated CICU with  
**16**  
single-patient  
rooms



Care where you are, when you need it.  
Cardiology services offered at



**25**  
regional sites of care  
in the WAM region

5th best pediatric  
hospital in the  
country according  
to US News &  
World Report



We support life-long heart care by treating patients from 0-21 years old. Our continuity of care starts with our Prenatal Diagnostic and extends all the way through our Adult Congenital Heart Transition clinic, a partnership with the University of Washington

Patients can be seen same day or next day for evaluation and care.  
Learn more at [seattlechildrens.org/heart](http://seattlechildrens.org/heart)

Our accuracy rate  
prenatal evaluation  
**99.7%**  
See our outcomes  
at [seattlechildrens.org](http://seattlechildrens.org)

Only Pediatric Heart  
Transplant in a 6 state area.



covering **917,400**  
square miles

**7,968** Regional  
referrals



and over **8,000**  
patient visits



## By the Number

Care where you are, when you need it



54 regional sites with training  
and outreach across four states

**278**  
patient beds

**357,206**  
annual patient visits

With 1,186 people &  
330,000 square  
feet of space, Seattle  
Children's Research  
Institute is dedicated  
to a future without  
childhood disease.



34,825 Emergency Department  
visits + 20,120 Urgent Care visits =  
Seattle Children's Hospital is ready  
when you need us

**24/7/365**



**450** guilds  
and **6,200**  
members:

Seattle Children's Hospital  
Guild Association is the largest  
volunteer network of any  
hospital in the country.

The need for uncompensated care is growing



Seattle Children's  
Research Institute  
is ranked  
**5th**  
among pediatric  
research institu-  
tions in NIH funding.

Our generous community gave  
\$2,000 gifts totaling \$62.8 million  
in 2013.

22+ 1,000 gifts

**52,021**  
gifts under \$100. Every gift, of  
every size, makes a difference.



## Seattle Children's Nursing by the Numbers

**1,766**  
nurses



**116**  
different areas,  
programs and  
departments  
supported



Nurses shared innovative projects and research  
on the local and national stage

**102**  
poster and podium  
presentations



**15**  
published  
papers



**210**  
advanced  
practice  
providers



**376**  
nurses volunteered  
their expertise this year,  
both domestically and  
internationally



**45**  
hold a leadership position in  
a professional organization



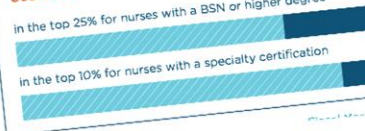
**59%**  
specialty certification rate,  
which is higher than the  
national average



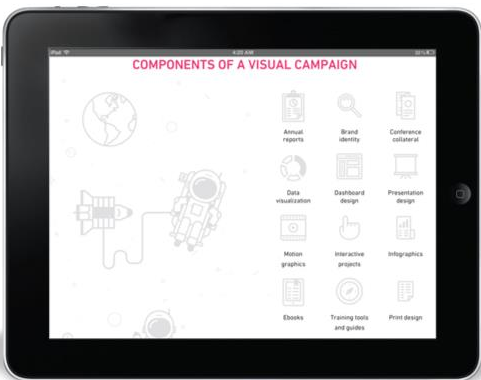
Average experience is  
**8+ years**



Among children's hospitals,  
Seattle Children's ranks







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