



# Invent the Future

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# CoSN Mission

**CoSN serves K-12 technology leaders who through their strategic use of technology, improve teaching and learning.**

## **Core Value**

The primary challenge is human, not technical

## **Audience**

School system technology and education leaders

## **The CoSN Focus**

Leadership and Policy

# Technology Popular in 1992





# NMC/CoSN Horizon Report 2017 K-12 Edition

[www.cosn.org/horizon](http://www.cosn.org/horizon)



# KEY TRENDS ACCELERATING ED TECH

## LONG-TERM TRENDS

- Advancing Cultures of Innovation
- Deeper Learning Approaches

## MID-TERM TRENDS

- Growing Focus on Measuring Learning
- Redesigning Learning Spaces

## SHORT-TERM TRENDS

- Coding as a Literacy
- Rise of STEAM Learning





# SIGNIFICANT CHALLENGES IMPEDING ED TECH

## SOLVABLE CHALLENGES

- Authentic Learning Experiences
- Improving Digital Literacy

## DIFFICULT CHALLENGES

- Rethinking the Roles of Teachers
- Teaching Computational Thinking

## WICKED CHALLENGES

- Achievement Gap
- Sustaining Innovation through Leadership Changes



# IMPORTANT ED TECH DEVELOPMENTS

## ONE YEAR OR LESS

- Makerspaces
- Robotics

## TWO TO THREE YEARS

- Analytics Technologies
- Virtual Reality

## FOUR TO FIVE YEARS

- Artificial Intelligence
- Internet of Things



# Ed Tech Trends

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
<b>Near Term</b> One Year or Less	Grassroots Video	Collaborative Environments	Cloud Computing	Cloud Computing	Mobile Devices Apps	Cloud Computing	BYOD	BYOD	Makerspaces	<b>Maker Spaces</b>
	Collaboration Webs	Online Communication Tools	Collaborative Environment	Mobiles	Tablet Computing	Mobile Learning	Cloud Computing	Makerspaces	Online Learning	<b>Robotics</b>
<b>Mid Term</b> Two to Three Years	Mobile Broadband	Mobiles	Mobiles	Game-Based Learning	Game-Based Learning	Learning Analytics	Games and Gamification	3D Printing	Robotics	<b>Analytics Technologies</b>
	Data Mashups	Cloud Computing	Game-Based Learning	Open Content	Personal Learning Environments	Open Content	Learning Analytics	Adaptive Learning Technologies	Virtual Reality	<b>Virtual Reality</b>
<b>Far Term</b> Four to Five Years	Collective Intelligence	Smart Objects	Augmented Reality	Learning Analytics	Augmented Reality	3D Printing	The Internet of Things	Digital Bad	Artificial Intelligence	<b>Artificial Intelligence</b>
	Social Operating Systems	The Personal Web	Flexible Display	Personal Learning Environments	Natural User Interfaces	Virtual and Remote Laboratories	Wearable Technology	Wearable Technology	Wearable Technology	<b>Internet of Things</b>



# Key Trends



**Trend 1: Digital Divide (devices & access)**



**Trend 2: Internet Safety**



**Trend 3: Acceptable to Responsible Use**



**Trend 4: Privacy**



**Trend 5: Digital Equity (broadband anywhere)**

# Trend 1: Digital Divide



- **Devices**
- **Basic Internet Access**

## Trend 2: Safety



**Safety concerns shape technology's use in education over past two decades...**

## Trend 3: Acceptable to Responsible Use



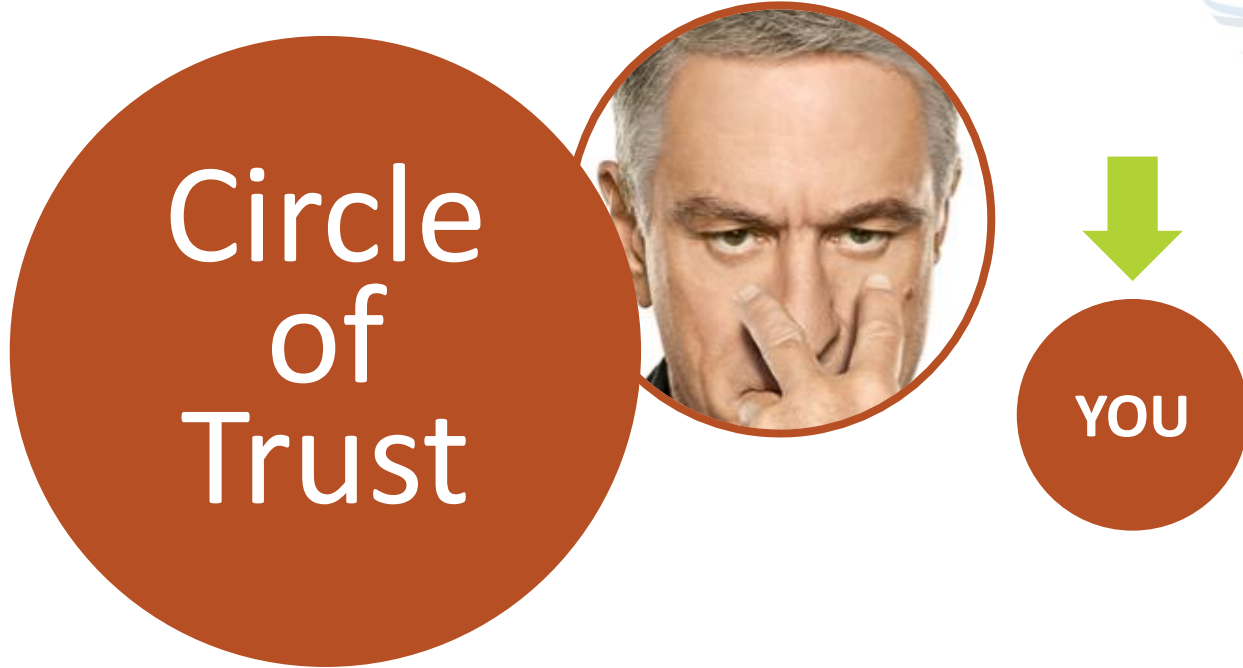
Acceptable Use Policies (AUP) becoming  
Responsible Use Policies (RUP)

## Trend 4: Privacy of Data



Greatest threat to personalizing learning

# Privacy to Trust





## Trend 5: Digital Equity



**No longer is basic connectivity sufficient. Learning is digital. Students and teachers need broadband anywhere, anytime.**

# Digital Equity: Outside of School



**70%**

of teachers say they  
require Internet for  
students to do their  
homework




# Digital Equity: Outside of School

Good  
news:

**82.5%** of U.S. homes with school-age children have broadband access (about 9 percentage points higher than average for all households).

Bad  
news:

**5 million** households, with school-age children, do not have high-speed Internet service at home.



Low-income  
homes with children are  
**FOUR TIMES**  
more likely to lack  
broadband vs.  
middle/upper income  
families

Black and Hispanic  
homes make up a  
disproportionate  
share of that 5  
million.

# The Homework Gap



[www.cosn.org/digital-equity](http://www.cosn.org/digital-equity)



Leadership & Vision

Educational Environment

Managing Technology

# FRAMEWORK

of Essential Skills of the K-12 CTO

[www.cosn.org/framework](http://www.cosn.org/framework)

[www.cosn.org/certification](http://www.cosn.org/certification)



# Certified Education Technology Leader (CETL™)



[cosn.org/certification](https://cosn.org/certification)

# Transformation. Momentum.

**From Digital Divide to Digital Equity**

**From Acceptable Use to Responsible Use**

**From Privacy to Trust**

**Become an education technology leader.**



# Crystal Ball

Less about the technology,  
more about the learning

More innovation in job titles  
and functional responsibilities



[cosnconference.org](http://cosnconference.org)

**CoSN2018**



# **EXPONENTIAL CHANGE**

*Designing Learning in the 4th Industrial Revolution*

**Washington, DC • March 12-15**





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