# DRIVING
# K–12
# INNOVATION

Toolkit
**2019**

CoSN
LEADING EDUCATION INNOVATION

*Driving K–12 Innovation* is an initiative of CoSN (Consortium for School Networking). This initiative addresses a key challenge for educational technology leaders: making smart, strategic decisions to transform learning experiences and environments and preparing students to thrive in a digital world.

The final, comprehensive edition, including a series of reports, explores the dynamics of technology, pedagogy and education systems, and trends that are animating efforts to reimagine learning. This series also focuses on the people confronting new challenges and seizing new opportunities—system leaders, teachers and students, and their broader communities with a stake in innovation.

The *Driving K–12 Innovation 2019* report focused on three distinct aspects of innovation: hurdles, accelerators and tech enablers.

**1**

### HURDLES
Hurdles are more than pesky obstacles. They are significant organizational and human capacity challenges that force educators to slow down, prepare themselves and—with sufficient practice, knowhow and tools—make the leap to innovation.
*Driving K–12 Innovation / 2019 Hurdles*

**2**

### ACCELERATORS
Accelerators are megatrends that drive the needs and skills expected of students and educators. Some disruptive shifts are moving rapidly (even suddenly), while others are happening so gradually that their effects may not be felt for years.
*Driving K–12 Innovation / 2019 Accelerators*

**3**

### TECH ENABLERS
Tech enablers are supporting tools that smooth the way to more expansive opportunities and solutions in education.
*Driving K–12 Innovation / 2019 Tech Enablers*

This toolkit provides practical guidance and resources for educational leaders to spark a discussion in their community and school system around surmounting hurdles to innovation, propelling innovation with accelerators and supporting innovation with tech enablers in their community and school system.

# AT A GLANCE

## 2019 TOP OPPORTUNITIES FOR DRIVING K–12 INNOVATION

The *Driving K–12 Innovation* international Advisory Board of more than 100 distinguished educational technology experts identified and ranked more than 75 Hurdles, Accelerators and Tech Enablers. The Advisory Board ranked these 15 as the most important to address in 2019.

## Top 5
## Hurdles
### *Paving the way to innovation*

1. Scaling and sustaining innovation
2. Digital equity
3. The gap between technology and pedagogy
4. Ongoing professional development
5. Technology and the future of work

## Top 5
## Accelerators
### *Driving innovation*

1. Learners as creators
2. Data-driven practices
3. Personalization
4. Design thinking
5. Building the capacity of human leaders

## Top 5
## Tech Enablers
### *Surmounting hurdles and embracing accelerators*

1. Mobile devices
2. Blended learning
3. Cloud infrastructure
4. Extended reality (augmented, mixed and virtual reality)
5. Analytics and adaptive technologies

# AT A GLANCE

The *Driving K–12 Innovation 2019* final report features spotlights on two hurdles, two accelerators and two tech enablers, which explore the challenges and opportunities they present.

## SPOTLIGHT ON HURDLES

▶ **The gap between technology and pedagogy.** This hurdle captures with a new sense of urgency a perennial challenge: tensions that arise when the impulse to adopt new technologies takes precedence over preparation to use them effectively. Continuing advances in technology create disconnects between the needs of students and the skill sets of teachers.

▶ **Technology and the future of work.** Artificial intelligence, "deep learning" and robotics are among the game-changing technologies that are beginning to alter the nature of work and, thus, workforce demands. While schools clearly face many hurdles in preparing students with the skills they need to succeed today, emerging technologies could bring even steeper challenges for educators.

## SPOTLIGHT ON ACCELERATORS

▶ **Learners as creators.** Creativity is a valuable, indeed essential, competency in workplaces today. Future-focused learning means learning by doing and making—applying knowledge and skills to solve real problems not just theoretically, but practically.

▶ **Personalization.** Schools are under pressure to stay relevant in the midst of a seismic shift from one-size-fits-all to tailor-made interactions in the consumer world. Students and parents increasingly expect the same from education—student-centric learning experiences that respond to distinct assets, needs, preferences and interests.

## SPOTLIGHT ON TECH ENABLERS

▶ **Blended learning.** The influx of ever-more-capable digital technologies into schools and students' lives is amplifying interest in effectively "blending" them into instruction. There's also heightened recognition the world over that digital fluency is not a luxury in learning, but an essential foundation for pursuing knowledge, collaborating, creating and solving problems.

▶ **Analytics and adaptive technologies.** Data analytics and adaptive technologies work in combination. Data analytics synthesize data, discern meaningful patterns and generate actionable information about student learning for educators. Adaptive technologies monitor and adjust to student learning in the moment, serving up just-in-time learning activities to help students progress.

# ENGAGING THE
# COMMUNITY

**W**here should you start with the 2019 hurdles, accelerators and tech enablers that are ranked by the Advisory Board as "important" or "urgent" to address? How can you develop priorities and a shared vision for K–12 education that lifts all students to new heights in learning achievements? How do you turn your ideas into a plan for action—and implement it strategically?
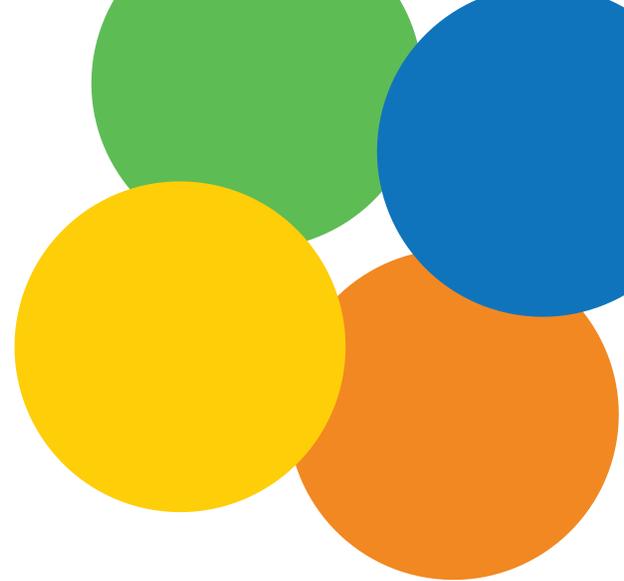
## Starting the Conversation

▶ Leverage CoSN's *Driving K–12 Innovation* series to launch conversations about innovation in K–12 learning in your own education institutions and organizations and with your community. Share the comprehensive *Driving K–12 Innovation* report with your school community:

*Driving K–12 Innovation / 2019*

Or share sections of the report that are available separately:

*Driving K–12 Innovation / 2019 Hurdles*

*Driving K–12 Innovation / 2019 Accelerators*

Driving K–12 Innovation / 2019 Tech Enablers

▶ Invite educators, parents, students and community members to participate in conversations about K–12 innovation.

▶ Use the discussion prompts on page 6 to focus the conversation and generate ideas.

## Going Deeper: Using the *Driving K–12 Innovation* Series for Strategic Planning

▶ Consider the strengths, vulnerabilities and opportunities in your school system in brainstorming and planning sessions with educators, parents, students and community members.

▶ Workshop your priorities and develop a shared vision with structured frameworks and activities.

## Implementing Best Practices

▶ Learn how certified education technology leaders (CETLs) recommend implementing innovations with near-term and longer-term actions.

▶ Leverage insights from the *Driving K–12 Innovation* Advisory Board on how to approach specific hurdles, accelerators and tech enablers.

# STARTING THE CONVERSATION

## Where

Conversations can happen anywhere. Town hall meetings, advisory sessions, parent–teacher association and school board meetings, and classroom meetups are all opportunities to talk face to face. Today, we all recognize the power of virtual conversations. Zoom, Skype, Google Hangouts and other platforms give you the opportunity to step beyond face to face.

## Who

Engage the community in dialogue and be sure to invite new stakeholder groups. Consider session(s) with and for students, representatives from your neighboring higher education communities, local business leaders and government representatives. Broadening the discussion will help you gather a variety of perspectives and can help establish important new connections and leverage relationships in the future.

## How

Develop core messages that you want to get across. Keep them simple and snappy. Think of your stakeholders and remember they are not living K–12 innovation daily (at least directly).

There are limitless ways to communicate and share this information. We've provided some samples beginning on page 8. Be sure to include some element of "edutainment," gamification, contests, scavenger hunts and the like. Think of all the possibilities available to you:

▶ Your school or school system's website

▶ Emails

▶ Social media (Instagram, Facebook and Twitter)

▶ Newsletters (digital and print)

▶ Your students (incorporate into their learning experiences and involve them in the innovation process)

Decide on two to three conversations you want to have in your community—don't try to do too much at once. Use the discussion questions and prompts that follow for the three aspects of driving K–12 innovation.

## Discussion Questions and Prompts

### HURDLES

▶ After reviewing the top five hurdles identified by experts in the *Driving K–12 Innovation* report, which hurdle do you think is the most important in our school system? Feel free to add additional hurdles not identified in the report.

### ACCELERATORS

▶ After reviewing the top five accelerators identified by experts in the *Driving K–12 Innovation* report, which accelerator do you think is the most important in our school system? Feel free to add additional accelerators not identified in the report.

### TECH ENABLERS

▶ Reflecting on the hurdle and accelerator you selected, are any of the five tech enablers in the *Driving K–12 Innovation* report appropriate for our school system to consider?

## What Happens Afterward?

Think of how many emails, tweets, texts and conversations make up your daily work and our personal lives. Innovation discussions can't be one-and-done; they must be ongoing.

To keep people engaged in the conversation and inspire more ideas in your community, consider sharing some stories of how other school systems and organizations are innovating in education.

### Exemplary Approaches to K–12 Innovation

▶ With demand for science, technology, engineering and mathematics (STEM) skills increasing, **South Korea** now emphasizes "computational thinking, coding, and creative expression through software" in its national curriculum. To support this instructional priority and close the gap between technology and pedagogy, the country has trained thousands of elementary and middle school teachers in software education. *(Driving K–12 Education / 2019 Hurdles)*

▶ Recognizing that creativity is a valuable, indeed essential, competency today, **Pittsburgh** in the U.S. has nurtured a thriving Maker community. More than 350 organizations—including early learning centers and schools, museums and libraries, after-school programs and community nonprofits, colleges and universities, educational technology startups and major corporations, philanthropies and civic leaders—have pulled together to create a robust ecosystem to support learners as creators. (*Driving K–12 Innovation / 2019 Accelerators)*

▶ Districts and schools in the **U.S.** working with Digital Learning Collaborative are using blended learning to address a variety of educational goals, including offering career and technical education, addressing equity issues, reducing dropout rates, serving at-risk students, providing world languages in a small district, and educating during extended emergences. Blended learning can be a bridge to personalization, a top accelerator of innovation. (*Driving K–12 Innovation / 2019 Tech Enablers)*

## COMMUNICATIONS TIPS AND SAMPLES

### Tip: Know Your Audience

Press releases, emails and social media platforms are tools you can use to build awareness, interest and engagement in *Driving K–12 Innovation* events and initiatives with your stakeholders.

If you have data analytics tools for your communications, use them to develop a plan to reach all of your stakeholders, such as local media, educators, parents, students and the wider community, including businesspeople and postsecondary educators. The key is to know your audience. How do different stakeholders prefer to receive communications from you? Which social media platforms do they use most? What types of posts get the most reaction? Where do you see the most engagement? Understanding your audience will help you differentiate your communications to different segments of your audience and achieve the greatest impact.

### Press Releases

Use press releases to local media to spread the word about your *Driving K–12 Innovation* event, encourage stakeholder attendance and promote media coverage. Follow up with media contacts to welcome their reporting and ask if they need logistical support for equipment. Offer interviews to amplify your message. If you do not have media contacts, reach out to the editor of your local paper.

**FOR IMMEDIATE RELEASE**

[School system
or school logo]

# [School system or school] to Host Community Event
# to Discuss How Technology Can Transform K–12 Education

For information, contact: [school system or school public relations contact and contact information]

[Date]—[School system or school] is hosting a community discussion to learn more about the major themes driving, hindering and enabling teaching and learning innovation at schools, and consider strategies for [school system or school]. This discussion will leverage three easy-to-read publications created by CoSN (Consortium for School Networking) about how K–12 learning experiences are influenced by emerging technology.

A group of more than 100 internationally known educational technology leaders collaborated to develop publications addressing:

- **Hurdles.** Obstacles that make people slow down, evaluate, practice and then make the leap to better support teaching and learning.

- **Accelerators.** Megatrends that drive change—sometimes suddenly, over time, or so gradually the implications aren't apparent.

- **Tech Enablers.** Tools that support smoother leaps over the hurdles and expansive changes in global K–12 education.

The event will be held at [location] at [date and time]. Educators, staff, parents, and all school stakeholders are invited to attend. [Include registration link or RSVP email address].

"These reports, compiled over a yearlong discourse, will serve as a technology planning guide for educators, school leaders, administrators and technologists," said [school system or school leader]. "We hope that the community, including parents, policymakers and businesspeople, will take the time to attend this discussion and share their perspectives."

**About [School system or school]**

[Insert boilerplate]

**About CoSN**

CoSN (the Consortium for School Networking) is the premier professional association for school system technology leaders. CoSN provides thought leadership resources, community best practices and advocacy tools to help leaders succeed in the digital transformation. CoSN represents over 13 million students in school districts nationwide and continues to grow as a powerful and influential voice in K–12 education. Learn more at cosn.org.

## Emails

Use emails for people who aren't active on social media or who prefer this communication channel. Emails can be used to help you distribute the comprehensive *Driving K–12 Innovation 2019* report, or sections of the report, and to communicate about a *Driving K–12 Innovation* event.

### Tips for Writing Emails

#### Email Subject Lines

Subject lines should pique the interest of the intended recipients. There are a number of theories about what words to use in subject lines, the use of personalization and subject line length. Integrating questions in subject lines generally works well. Bottom line: write a subject line that is meaningful to your audience.

### Sample Email Subject Lines for Events

#### For general events

▶ Interested in how technology impacts your child's learning experience?

▶ What trends are driving your child's learning experience?

▶ You're invited to a [school system or school] event!

▶ Come learn about how technology and learning intersect in K–12 education

▶ We want your feedback—[school system or school event and date]

#### For Hurdles-focused events

▶ What are the obstacles to improving learning experiences?

#### For Accelerators-focused events

▶ What societal trends are driving changes at school?

#### For Tech Enablers-focused events

▶ Learn about the technology developments enhancing teaching and learning.

#### Text Pointers

Remember that emails are often read on mobile devices.

▶ Keep it brief.

▶ Keep it focused. Use one core message per email.

▶ Stage your message. Important information goes at the beginning.

▶ You don't need a salutation and closing.

▶ Provide a clear signature block, preferably with a phone number and email to contact.

▶ Don't include an attachment; that gets the attention of spam filters.

▶ Do embed links to event registration and to the *Driving K–12 Innovation* report, or sections of the report:
*Driving K–12 Innovation 2019*

*Driving K–12 Innovation / 2019 Hurdles*
*Driving K–12 Innovation / 2019 Accelerators*
*Driving K–12 Innovation / 2019 Tech Enablers*

## Sample Emails for a *Driving K–12 Innovation* Event

**For a fall event:**

Each school year brings new educational practices and tools. Parents and members of the community should be kept up-to-date on classroom trends. We want you to be current on technology developments and challenges, here at [school system or school]. We'll be sharing some data we've received from CoSN (Consortium for School Networking) outlining some of the trends in the world of education technology.

Where:

When:

Register now!

**For a parent event:**

Technology has and will continue to change the way we live. It's also changing the way students learn. I'm inviting you to a free event, sponsored by [school system or school] to discuss how trends in technology are impacting your child's learning experience. We'll be sharing information from CoSN (Consortium for School Networking), which recently surveyed over 100 K–12 educational technology leaders.

Where:

When:

Register now!

**For a community event:**

Whether you are a parent, policymaker, business or a community member, understanding the intersection between technology and learning is important. That's why I'm inviting you to a free event, sponsored by [school system or school] to discuss how trends in technology are impacting our students' learning experience. We'll be sharing information from CoSN (Consortium for School Networking), which recently surveyed over 100 K-12 educational technology leaders.

Where:

When:

Register now!

### Core Messages for Emails

If you want to draft your own emails, here are some key points:

▶ It's important to create a dialogue among teachers, administrators, parents, businesspeople and the community at large. Why? Today's K–12 students are tomorrow's higher education students, job seekers and employees.

▶ Engaging technology for the sake of technology is not effective. Enhancing the learning experience for individual learners is.

▶ The pace of change is increasing exponentially in part due to technological advancement.

▶ The data you are sharing is from CoSN (Consortium for School Networking) and was vetted by an international Advisory Board of over 100 school leaders and educators.

### Social Media

Your school system or school likely already has a Facebook page. Perhaps school leaders are active on Twitter. Students are more likely to pay attention to Instagram. All of these social media channels can help you spread the message about your event, as can the *Driving K-12 Innovation* series itself. Use these social media channels to maximize interest prior to the event, create buzz and keep the conversation going afterwards.

### Tips for Using Twitter

Twitter is a widely used communications channel in the education technology community. Policymakers and business people are more likely to see your posts here than on Facebook.

Use hashtags and your school system's or school's Twitter handles to tag influencers—but don't start posts with your Twitter handle, which will limit your reach to the people who already follow you. Influencers are highly active Twitter users with significant numbers of followers. You can simply ask if you can tag them or if they will retweet your posts.

Twitter posts are limited to 280 characters (including spaces). The most common Twitter length is 33 characters, so keep it concise. Images help tweet visibility, though you should take care not violate privacy or usage rights. And you should adhere to accessibility standards. Links are also helpful for retweeting purposes. Invest in a tool (like Hootsuite, Sprout Social or Sendible) to schedule posts for optimal times.

### Suggested Twitter Hashtags for *Driving K-12 Innovation*

▶ #edtech
▶ #edtechleader
▶ #parents
▶ #students
▶ #studentlearning
▶ #k12
▶ #drivingk12innovation

### Suggested Twitter Handles

@[yourschoolsystemorschool]

@yourschoolsystemPRperson

@CoSN

### Using Facebook

The tendency on school Facebook pages is to focus on the more social aspects of school life—competitions, band concerts, awards, graduations—that appeal to students and parents. But Facebook can help you build awareness and interest in a *Driving K–12 Innovation* event or initiative as well. If you choose to use Facebook, use the same hashtags you use on Twitter. Photos with captions, again considering privacy concerns and usage rights, are most effective on Facebook. Consider using Facebook Live to livestream a video at your event or a message from your school system or school leader about the series. Tips for using Facebook Live can be found here.

## Sample Social Media Schedule with Content and Media Recommendations

These starter ideas for posts can be adapted for Twitter, Facebook and other social channels.

### As soon as you set the date

| CONTENT | MEDIA |
|---|---|
| Save the date for a learning and strategy session on technology and enhancing learning experiences for students: [date/time/location] | Text post, image and link to event information |

### One week before event

| CONTENT | MEDIA |
|---|---|
| One week from today, will you be co-designing the future of #K12? Make sure you're registered for our #DrivingK12Innovation #edtech session: [date/time/location] | Text post, image and link to event information |

### Day of event (morning)

| CONTENT | MEDIA |
|---|---|
| Reminder! Our #DrivingK12Innovation session is tonight @ [time/location] | Text post, image and link to event information |

### Day of event (one hour before)

| CONTENT | MEDIA |
|---|---|
| Time's running out! #DrivingK12Innovation event on #student learning/#edtech tonight: [time/location] | Text post, image and link to event information |

### Day of event (one hour after)

| CONTENT | MEDIA |
|---|---|
| Thank you to all who attended our #DrivingK12Innovation session tonight! [Briefly describe the experience.] | Event photo |

### Day after event

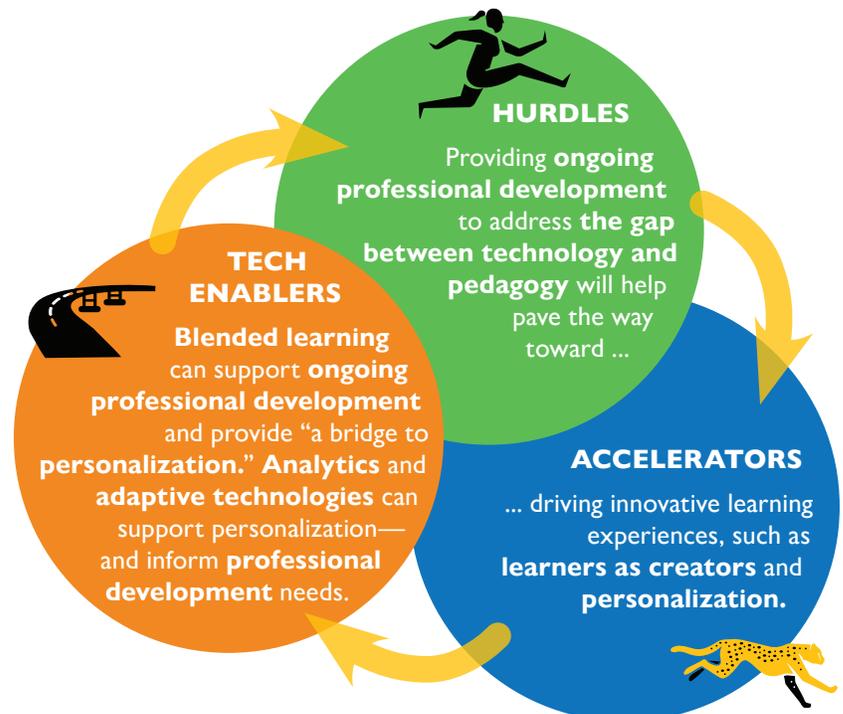| CONTENT | MEDIA |
|---|---|
| Great conversation with #parents and #edtechleaders at the #DrivingK12Innovation event last night. [Add brief highlight.] | Event photo |

### One week after event

| CONTENT | MEDIA |
|---|---|
| It's been a week since [school system or school] #DrivingK12Innovation event. As we plan our priorities, what #edtech topics have stuck with you? | Event photo |

# GOING DEEPER: USING THE *DRIVING K–12 INNOVATION* SERIES FOR STRATEGIC PLANNING

▶ Leverage CoSN's *Driving K–12 Innovation* series to plan for innovation in K–12 learning in your own education institutions and organizations and with your community.

▶ Consider opening your strategic planning sessions by sharing information, stories or data from the reports that you find relevant to your school system.

▶ Use the discussion prompts on page 6 for strategic planning sessions to identify which top hurdles, accelerators and tech enablers resonate with your school community.

▶ Develop a shared vision of innovative education with your school community.

## Bright Idea

Think about the opportunities for innovation in combination. Explore the connections among hurdles, accelerators and tech enablers during community conversations, workshopping and strategic planning, and preparation to implement your plans. Here's an example:

**HURDLES**

Providing **ongoing professional development** to address **the gap between technology and pedagogy** will help pave the way toward …

**TECH ENABLERS**

**Blended learning** can support **ongoing professional development** and provide "a bridge to personalization." Analytics and **adaptive technologies** can support personalization— and inform **professional development** needs.

**ACCELERATORS**

… driving innovative learning experiences, such as **learners as creators** and **personalization.**

# FRAMEWORKS FOR INNOVATION

▶ Consider using a framework for your strategic planning sessions and for workshopping ideas. Frameworks help people with sensemaking—identifying problems and opportunities and generating and iterating ideas to develop workable solutions.

Established frameworks can help you identify and act on opportunities for innovation. As you select a framework to guide you, consider your starting point for innovation, where you hope to go and who needs to be involved.

## 8-Step Process for Leading Change

This model can help you create change by getting people to invest in the vision, as well as leveraging effective communication and collective wisdom.

**CREATE**
a sense of urgency

**BUILD**
a guiding coalition

**FORM**
a strategic vision
and initiatives

**ENLIST**
a volunteer army

**ENABLE**
action by removing
barriers

**GENERATE**
short-term wins

**SUSTAIN**
acceleration

**INSTITUTE**
change

Source: Kotter, J.P. (2014). *Accelerate: Building Strategic Agility for a Faster-Moving World.* Boston: Harvard Business School Publishing.

## Stakeholder Framework

This framework can help you drive innovation by focusing on adding value for different stakeholder groups. It is important to simultaneously partner with stakeholders to co-design this innovation.
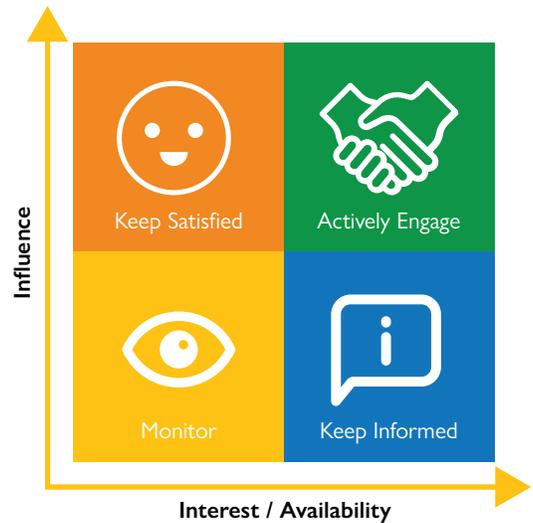


Source: Schiller, C., Winters, M., Hanson, H.M., & Ashe, M.C. (May 2, 2013.) "A Framework for Stakeholder Identification in Concept Mapping and Health Research: A Novel Process and Its Application to Older Adult Mobility and the Build Environment." BMC Public Health 13:428. doi: 10.1186/1471-2458-13-428

## Design Thinking (IDEO)

This approach recommends adopting an exploratory and experimentation mindset and can help you identify opportunities, design innovation, and iteratively evaluate and improve.



| **Discovery** | **Interpretation** | **Ideation** | **Experimentation** | **Evolution** |
|---|---|---|---|---|
| I have a challenge. How do I approach it? | I learned something. How do I interpret it? | I see an opportunity. What do I create? | I have an idea. How do I build it? | I tried something. How do I evolve it? |

Source: IDEO. Design Thinking. https://www.ideou.com/pages/design-thinking
What Is Design Thinking? https://www.ideou.com/blogs/inspiration/what-is-design-thinking
http://bit.ly/2XwkQdh

# IMPLEMENTING
# BEST PRACTICES

**A**t the 2019 CoSN Annual Conference in Portland, OR, about 50 school and school system technology leaders convened for the CETL (Certified Education Technology Leaders) Summit. Leveraging the findings from the 2019 *Driving K-12 Innovation* series, the CETLs engaged in design thinking and consensus-building activities aimed at establishing a set of best practices for advancing technology-enabled innovation in the near term (one year out) and more distant future (five years out).

## Near-Term (Year One)

**1. Define an innovation context.** The CETLs believe that nuanced approaches are needed to address the fact that schools and school systems vary in size, demographics and even mission. Ensuring that the strategic goals for technology integration align with an organizational culture that is conducive to change is vital. School leaders must ask: What challenges are we trying to address? What opportunities are we looking to leverage? What cultural conditions do we need to change to embrace innovation? Technology use must be tied to specific desired outcomes for student success.

**2. Create an "awareness and buy-in" campaign.** Top-down approaches to technology mandates that do not incorporate stakeholder voices (read: teachers, parents, students) do not acknowledge the people they impact. Strategic plans must be collaboratively generated, and school leaders must make them transparent before they are implemented. Innovation efforts will be more effective when all stakeholders are aligned around mission, desired outcomes and concrete measures of success. Data-capturing processes must be established for these measures.

## Mid-Term (By Year Three)

**3. Perform a self-assessment and realign priorities.** Using the measures established in the strategic plan, school leaders must benchmark their progress towards outcomes. Not "measuring up" in certain areas is not automatically a sign of failure—it's an indication that schools need to iterate and revise their strategies and/or tactics. Agility is a vital component of spurring innovation.

**4. Demonstrate how the school/system mindset has shifted.** The CETLs believe that by year three schools should be able to pinpoint and articulate the ways in which the culture has positively changed as a result of the strategic innovation efforts. Revisit the awareness campaign from year one and pick up the story with a new arc. Convene school stakeholders to share the kinds of stories that not even rigorous data collection can illuminate.

## Far-Term (By Year Five)

**5. Leveraging data, evaluate the strategic plan and set new goals.** Innovation is not necessarily a fixed point. After several years, the original goals may have been accomplished or have become obsolete. Revisiting and building upon the original vision is important so that schools can evolve to keep pace with societal changes, emerging pedagogies and shifting student needs. School leaders must adopt evidence-based approaches but also be open to defining new best practices.

# TIPS FROM THE DRIVING K–12 INNOVATION **ADVISORY BOARD**



**HURDLES**



**ACCELERATORS**

## On the Gap Between Technology and Pedagogy

▶ Evaluate how technology can contribute to your vision, mission and goals.

▶ Develop a strategic plan that aligns technology with learning expectations and pedagogy.

▶ Avoid the "shiny object syndrome" in purchasing technology by bringing cross-cutting expertise, including teachers, to the table.

▶ Budget for professional development with every technology purchase.

▶ Champion technology with strong leadership in schools.

▶ Encourage professional learning communities (PLCs).

▶ Monitor the effectiveness of technology and make course corrections, if needed.

▶ Scale and sustain effective technology with an intentional system of multiple, reinforcing, aligned connections to the curriculum, professional development, leadership, assessment and parent engagement.

## On the Future of Work and Technology

It will take time to fully grasp how next-generation technologies will change the future of work and education. For now, the Advisory Board recommends paying attention to developments in this arena and starting to discuss how emerging technologies will impact:

▶ life and work and what that means for preparing students for a happy and productive future life in that world (the "what" of education); and

▶ education through digital learning materials and environments, analyzing learning behavior, interactions between learners and individual learning experiences for each learner (the "how" of education).
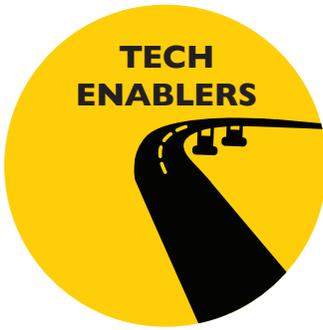
## On Learners as Creators

▶ Take an expansive view of creativity.

▶ Integrate creative learning with the core instructional program.

▶ Develop meaningful literacies.

▶ Pay attention to rigor.

▶ Set challenging parameters to deepen learning.

▶ Broaden assessment.

## TECH ENABLERS

### On Blended Learning

▶ Leverage blended learning to reduce the hurdle of lack of parent and community support for technology. Moving educational technology into the home removes the mystery around what digital learning looks like and allows parents to be more engaged in the learning experience.

▶ Let teachers learn, play and develop digital content before the mass rollout of blended learning.

▶ Use this tech enabler to support ongoing professional development for teachers. Face-to-face interactions can be supplemented with online learning activities.

### On Analytics and Adaptive Technologies

▶ Integrate and implement analytics into teaching practice. Otherwise, one-size-fits-all, 20th-century education will continue to be the norm.

▶ Improve pedagogical fluency to use these technologies effectively.

▶ Ensure that you are using student data thoughtfully. Prescriptive analytics can identify multiple strategies and options that have worked with others and allow students to choose a path. But make sure students have access to the full scope of paths, if they are interested.

# ACKNOWLEDGMENTS

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**CoSN** (Consortium for School Networking) is the premier North American professional association for school system technology leaders. CoSN is the only professional association dedicated exclusively to the educational technology leaders who are working to transform learning. CoSN provides thought leadership resources, leadership development, best practices and advocacy tools for an engaged community of peers, helping leaders succeed in the digital transformation. CoSN represents over 13 million students in school districts nationwide and continues to grow as a powerful and influential voice in K–12 education.

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