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SPOTLIGHT

How to Be Proactive in the Face of Uncertainty: Scenario Planning for School Districts

by John J-H Kim and Hugh Courtney

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Scenario planning, an approach that has been successfully used in a variety of industries, can also be adopted by public school districts to confront change and think strategically, whatever the fiscal crisis may bring.

How To Be Proactive In The Face of Uncertainty: Scenario Planning for School Districts

| JOHN J-H KIM AND HUGH COURTNEY

Most superintendents and their senior teams have come to develop a finely calibrated sense of how to best manage the year-to-year changes in their districts. Even in the face of large annual growth in student population, significant building projects, or major changes to curriculum, school leadership teams have developed an effective approach combining experience, intuition, and analytical analyses to help make good decisions.

In the past year, however, the level of uncertainty has changed dramatically. As the nation (and the world!) lurches through an unprecedented economic recession, the ripple effects are affecting school districts around the country in unprecedented ways. All of a sudden, the future looks highly unpredictable and the well-honed decision-making skills driven from experience no longer seem applicable. School districts must now make onerous decisions in the face of highly uncertain information.

The size, scope, and timing of the federal stimulus bill ironically have added even greater complexity to school districts' decisions. The Department of Education has so far made clear only the broad outlines of the American Recovery and Reinvestment Act (ARRA). District leaders know they will receive more money, but they do not know precisely how much money will be allotted, when it will be delivered, and what requirements will accompany

the distribution of funds. Furthermore, because the stimulus funds are designed to address short-term needs such as preservation of jobs as well as promote longer-term goals connected to reform, the level of uncertainty is even greater.

The most common responses to increasing uncertainty tend to be the least prudent. At a recent meeting of school district Chief Financial Officers, there were a wide range of responses to the budgeting problem posed by the economic crisis and the potential for significant ARRA funds. A few districts stated that they would essentially ignore the uncertainty, plan as usual, and come up with a budget. Others stated that they would go ahead with a "gut" guess as to what the future would look like and do the best they could. But most said they were taking a wait-and-see approach and hoping for guidance from the states on how the stimulus dollars could be spent. While it may seem logical to postpone making an important decision until there is greater clarity, it is unlikely that uncertainty will completely evanesce; more likely, new dimensions of uncertainty will arise.

With proactive preparation, districts can manage the downside risk, and seize the upside opportunity that uncertainty creates. The key to transforming the current crisis into a strategic opportunity is to accept the uncertainty of the current fiscal situation, recognize the uncertain dimensions of each individual decision, and structure the strategic planning process accordingly.



This article establishes a framework and a process for scenario planning to allow school districts to act in a strategic, long-term capacity given the uncertainty of the times.

The Power of Scenario Planning

School districts aren't alone in having to wrestle with highly uncertain information. Like school districts, the financial markets have also lost their sense of balance. In calmer times, financiers and economists used to be able to use basic economic theory to determine how one variable would affect others. They could make good estimates about growth rates and unemployment and anticipate inflation and interest rates accordingly.

But the recent fiscal crisis has changed all that. Since the fall, investors have faced the uncertainty imposed by the convergence of a credit crisis, a cratering stock market, and declining interest rates. Wall Street isn't even sure anymore about what to be on the lookout for. Investors can't tell whether inflation or deflation is the bigger threat. They don't know how effective the bailout and stimulus packages will prove in promoting growth and lowering unemployment. Without a grasp of what will happen to growth rates and unemployment, they can't predict interest rates. And, not knowing the trajectory of interest rates, they can't bet on all the products—the dollar, commodities, home values, and the stock market—that interest rates affect.

A recent *Wall Street Journal* article showed investors how they could use scenario planning to deal with heightened uncertainty.¹ To help the investment community through the dizzying confusion of unknown variables, the *Wall Street Journal* constructed three broad scenarios of how the market

could unfold in the coming months. Each scenario has very different implications for decision-making:

In the “too hot” scenario, the huge infusion of liquidity resulting from the government stimulus and Federal Reserve policy would trigger fears of inflation. To compensate for the risk of inflation, investors would demand much higher interest rates. They would flock to inflation-protected assets such as gold, oil, and other commodities.

In the opposite, “too cold” scenario, fiscal and monetary policies would fail to jump-start the economy. Unemployment would remain high, and the reduced demand would raise the specter of deflation. To continue to try and stimulate the economy and protect against deflation, interest rates would remain low. This scenario would encourage investments in securities such as Treasury bills that effectively protect principal and interest payments from devaluation.

Finally, as in “Goldilocks,” the “just right” scenario would be the combination of government spending, tax breaks, and monetary easing that would propel consumer demand, increase GDP, and reduce unemployment. In this ideal scenario, interest rates would steady somewhat above their current all-time lows. The return of confidence and stability would bring investors back to the stock market.²

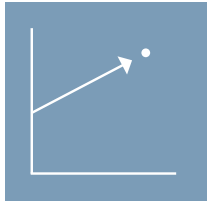
The *Wall Street Journal* scenarios provide a framework for investors to rethink and readjust their investment mix. Rather than ignoring uncertainty and holding steady with one predetermined investment strategy or shifting aimlessly from one investment product to another, scenario planning prompts investors to deliberate in more rigorous terms about the forms that the future could take. This structure enables investors to frame a response that maintains their desired strategy in a variety of potential situations. A risk-averse investor, unsure of which of the *Wall Street Journal* ▷



scenarios will become reality, may craft an investment portfolio that includes commodities, bonds, and equities in order to capture the upside across the possibilities. An investor more willing to embrace risk may place a bet on the direction of the interest rates, and emphasize one type of investment over others.

School districts can use a process similar to that of the *Wall Street Journal* to structure their response to the fiscal crisis. To start with, it is useful to categorize uncertainty into four distinct levels. At each level, a different amount of information can be determined, and the rest remains uncertain.

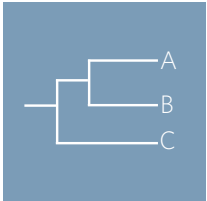
Level 1: A Clear-Enough Future



Level 1 uncertainty, “business as usual,” is an area that most people handle comfortably. With reasonable assuredness, superintendents could once chart many of their decisions with a solid prediction of the future.

To be sure, no event that has not yet taken place can permit a totally precise roadmap. But, in a level 1 situation, the projection of the possibilities is sufficiently narrow to point toward one dominant strategic direction.³

Level 2: Alternate Futures



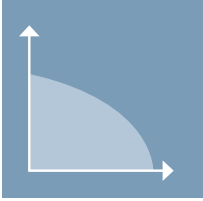
On the whole, the decisions confronting superintendents have migrated away from Level 1: A Clear-Enough Future. The recession, its uncertain duration, and its impact on all levels of tax collection, coupled with the potentially significant policy transitions of a new administration and the unclear strictures of state distribution of stimulus money have placed more issues in higher categories of uncertainty.

An increasingly common designation is Level 2 uncertainty. Instead of identifying the dominant direction, decision-makers must respond to Level 2 situations by defining a set of mutually exclusive outcomes. Ultimately, only one of these distinct possibilities will actually occur. Because of the discrete and limited nature of the routes it could follow, Level 2 uncertainty often results from a point of potentially sharp divergence, such as an election or a regulatory change.

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A superintendent preparing a budget in advance of a scheduled override election or bond referendum, for example, can trace a definitive break with two branches: 1) the revenue the district will receive if the election or referendum passes, and 2) the amount the district will receive if the mandate fails.

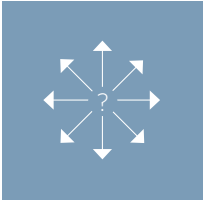
Level 3: A Range of Futures



Many strategic choices lack a sharp breaking point that yields different paths. Decisions not framed by an impetus such as an election or a distinct regulatory reform more often produce a range of possible outcomes. The actual outcome may ultimately lie anywhere in that range.

Municipal revenue, for instance, depends on a broad host of factors, which could cause infinite potential variations in a district’s final budget allocation. Based on projections of the tax levy, new growth, state aid, local receipts, and other revenues, a superintendent may know that the school budget allocation will decline between 10% and 30%, but the final number could fall anywhere within that range.

Level 4: True Ambiguity



Quantitative analysis becomes impossible at Level 4. Level 4 refers to situations in which future outcomes are not and cannot be known. No amount of analysis will illuminate the likely scenarios. The potential array of variables is too great and their interaction too unpredictable.

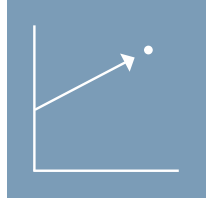
Few decisions, if any, that a district will face within the next five years would merit Level 4 categorization. But, with a longer view, Level 4 situations do exist.

Clayton Christensen’s work on disruptive education aims to determine what technological innovations would bring Level 4 uncertainty to the classroom. Asking expansive questions about the state of public education, or the method of service delivery in twenty years would constitute a Level 4 decision because the timespan, indefinite nature of the technological changes, and unclear reception by school districts would elude quantitative analysis.

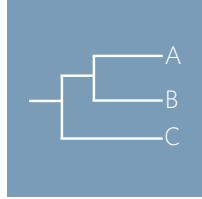
Scenario Planning Across The Four Levels

It is important to understand each level of uncertainty and be able to diagnose the situation accordingly. Here is a chart to help you structure the scenario planning process across the four levels of uncertainty:⁴

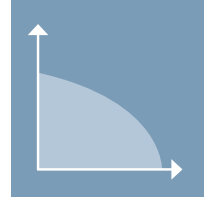
Level 1: A Clear-Enough Future



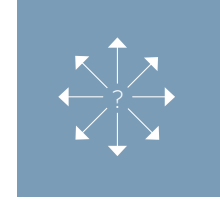
Level 2: Alternate Futures



Level 3: A Range of Futures



Level 4: True Ambiguity



Nature of scenarios	N/A	Mutually exclusive, collectively exhaustive (MECE) set of scenarios that describes each potential outcome	Representative set of 3-5 scenarios that largely covers the range of potential outcomes	Integrated sets of assumptions that one would "have to believe" about the future to support different proposed strategic options
Nature of process	Model the impact of uncertainty through sensitivity analysis, if at all	Develop implications — financial and otherwise — of each outcome for the industry and company Assign probabilities to each outcome, if possible Describe the dynamic path to each outcome	Choose representative points along the continuum of possible outcomes Develop implications — financial and otherwise — of these outcomes for the industry and company Describe the dynamic path to each outcome	Work backwards from potential strategic options to scenarios that would support such options Test for logic, likelihood and internal consistency through analogies and reference cases
How scenarios are used	N/A	Assess the payoffs to each strategic option in each scenario Assess how each strategic option may influence the probability of each scenario Combine these assessments with decision analysis techniques to choose the optimal strategic option	Assess the payoffs to each strategic option in each scenario Assess how each strategic option may influence the likelihood of different points along the continuum of outcomes Combine these assessments with qualitative decision analysis logic to choose the desired strategic option	Test scenario assumptions through comparison with analogies, reference cases, and executive team experiences Determine the set of assumptions (i.e., the scenario) that the management team is most comfortable supporting at this time

Source: Hugh Courtney, "Decision-Driven Scenarios for Assessing Four Levels of Uncertainty," *Strategy & Leadership*, Volume 31 No. 1, January-February 2003.



Rationalizing the Budget: “Fairview Union”

An Illustrative Story in Scenario Planning

This is a story about a fictional district, “Fairview Union,” with a storyline representing a composite of several districts that have employed, scenario planning.⁵ Since “Level 3: A Range of Futures” decisions are the most prevalent ones for school districts in today’s fiscally challenging environment, we would now like to illustrate the Level 3 scenario planning process through the story of the Fairview Union School District.

Fairview Union’s superintendent started this school year knowing that the district would have to brace for major budget cuts. The recession that officially started in December 2007 and drastically accelerated in September 2008 augured an ominous future for Fairview Union’s revenue. The final revenue number, depending on tax receipts and the status of grants and aid, would not become clear for many months, but the Superintendent knew that it would be unwise to wait to start factoring the fiscal crisis into Fairview Union’s budget planning. With a range of possible outcomes in the critical area of district funding, the case for scenario planning was clear. The district leadership agreed with the superintendent, and a subset of the leadership team convened as a scenario planning team.

“But the Superintendent knew that it would be unwise to wait... With a range of possible outcomes in the critical area of district funding, the case for scenario planning was clear.”

The scenario planning began in earnest with the onset of the budget season in the fall of 2008. As with any previous decision Fairview Union had made, the scenario planning team began by establishing a “fact-base” of key

information. It identified all of the factors-economic, business, and demographic-that impinged on the overall budget number.

Because the revenue that Fairview Union ultimately received would depend largely on what the city of Fairview would allocate to the schools, the district also gleaned data by maintaining an ongoing dialogue throughout the scenario planning process with municipal officials. District-city collaboration allowed each entity to learn more about the other’s budget priorities and reduction philosophy. It also enabled the scenario planning team to make more concrete estimates of how much money Fairview Union could expect to receive from the city.

Up to this point, the steps Fairview Union followed—defining the need, garnering support, forming a team, and collecting information—essentially matched the district’s standard and well-honed decision-making process. The third stage, creating discrete scenarios, unlocked the full power of scenario planning. This stage commenced with mapping the “axes of uncertainty,” the decision dynamics of both high-importance and high-uncertainty.⁶ For Fairview Union, the overarching question of funding depended on two axes of uncertainty. One was the extent to which Fairview Union’s normal sources of revenue would decline as a result of the recession. The other axis, which emerged later in the fall, was the promise of the federal stimulus. While mollifying the need for immediate budget cuts, the guarantee of a federal infusion raised its own issues of uncertainty. The scenario planning team had to consider how much money Fairview Union would receive through the stimulus, when this money would come, and what stipulations might be attached to it.

The spectrum of uncertainty that the axes presented became the basis for the set of scenarios. The scenario planning team juxtaposed combinations of potential amounts the district would receive through its normal funding sources with potential amounts the district would be granted through the federal stimulus.

To facilitate decision-making, the team distilled the myriad possibilities into three possible and meaningfully distinct outcomes. It wrote a description of each scenario:

“Tier 1: Scratching the Surface” represented the need for only relatively minor cuts, possible through increased efficiencies and reductions that could be easily and swiftly restored.

“Tier 2: Digging Deep” encompassed significant reductions in programs and services that would take a decade to recover.

“Tier 3: No Tomorrow,” the most far-reaching, would bring severe reductions that would take decades to recreate. Under this scenario, there was the possibility of noncompliance with state standards.

Essentially coterminous to the scenario planning steps was a process of community input. The district and municipal administration worked together to inform employees and the public about the budget process and to provide opportunities for them to make suggestions. Feedback was solicited as to how participants prioritized the district’s programs and which services they would be willing to see cut. The scenario planning and community input became mutually reinforcing activities. As the scenario planning team crafted more detailed scenarios, the district and municipal administrators were able to galvanize community members to wrestle with the harsh realities of specific budget constraints and necessary trade-offs. Similarly, as the district and municipal administrators learned more about the community’s priorities, they were able to refine their projections about how much revenue the district would require and how much the city would be willing to provide.

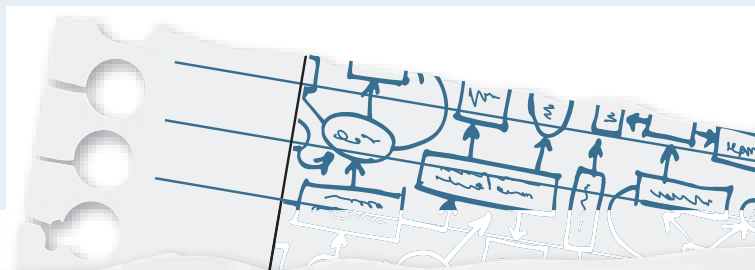
The three scenarios the scenario planning team had charted, as well as the information about the community’s priorities gleaned through outreach, provided the framework within which Fairview Union’s decision-making process took place. Assuming that each scenario became reality and envisioning the future under each scenario, the leadership went line-by-line through the district’s entire budget and, in light of how much money had to be cut overall, discussed alternatives for each program. District leadership designed a combination of cuts that matched the total cut necessary for each given scenario.

Each scenario held vastly different consequences for the district. Some highly popular programs, such as reading initiatives, and some compliance-driven necessities such as special education, faced few, if any, cuts across all three scenarios. But, in other areas, the move from one tier to another portended millions of dollars in funding differences. For example, if the scenario of “Tier 1: Scratching the Surface” became reality, the decision-making team would choose to maintain core high school instruction at level funding. Yet, in a “Tier 2: Digging Deep” scenario, the team planned to cut core high school instruction by several million dollars. If the worst-case, “Tier 3: No Tomorrow” scenario prevailed, the team would seek to eliminate many more millions from the same program.

To be sure, scenario planning did not remove the grave challenge facing Fairview Union. Some of the proposed reductions that could prove necessary would certainly be painful. As difficult as these cuts would be, however, they represented the product of a proactive and analytical process that prioritized instructional quality and targeted reductions away from the classroom.

Not all districts of course would make the same tradeoffs as Fairview Union. But, this is precisely the benefit of scenario planning. It can convert fiscal crisis into an opportunity for collective discussion about what is most vital for the district.

By constructing a clear framework for thinking about potential cuts, the scenario planning process prepared Fairview Union to adapt to any scenario becoming reality. The rigorous structure of the process prompted both district leaders and the community to reflect on their fundamental priorities for the district. The consensus that emerged around the need to maintain core academic and enrichment programs across scenarios simultaneously informed the city of Fairview as it finalized budget allocations. In other words, the priorities of upholding and promoting student standards that the scenario planning process elicited helped to assure that these priorities became reality. □





Putting Scenario Planning to Work

Other school districts can easily replicate Fairview Union’s approach. Here is a Four-Step Process for Scenario Planning:

1. Set the Stage

Articulate which major decision the scenario planning process is designed to address. By conveying the importance of this decision, establish the buy-in of your leadership team for using scenario planning. Drawing on the skills of your executives, form a scenario planning team and communicate the process going forward.

2. Create A “Fact-Base” of Key Information

Identify the key factors, such as money, staff, and time, that affect the decision. Also determine the dynamics, such as growth or funding, that make the future of these factors uncertain. Gather

available data and projections to ascertain as much as possible about the decision factors and the paths they will follow.

3. Create Discrete Scenarios to Evaluate

It is at this stage that the real power of scenario planning becomes clear. While steps one and two apply to a standard decision-making process, the creation of scenarios structures the future into a set of concrete possibilities. This set of scenarios should cover the full spectrum of uncertainty. Pick points along the spectrum that represent meaningfully distinct visions of the future. For each, write out a description of what the future would look like. In the Fairview Union story, the descriptions were the three tiers of “scratching the surface,” “digging deep,” and “no tomorrow.”

DMC Scenario Planning Process

Set the Stage

- Articulate which major decision the process is designed to address
- Establish leadership buy-in for using scenario planning
- Form the scenario planning team and assign roles
- Communicate the process

Create a “Fact-Base” of Key Information

- Identify key decision factors (e.g. money, staff, time, political climate, etc.)
- Identify the dynamics that create the uncertainty (e.g. growth, funding, changes in demand, etc.)
- Gather available data and projections
- Conduct research as necessary to fill critical knowledge gaps

Create Discrete Scenarios to Evaluate

- Identify key “axes of uncertainty” (dynamics with both high importance and high uncertainty)
- Create a set of scenarios that cover the full spectrum of uncertainty
- Write a description for each scenario

Make a Decision

- Describe what the future would look like in each scenario
- Arrive at a decision or recommendation
- Communicate the decision

Source: Adapted from Bill Ralston and Ian Wilson, *The Scenario Planning Handbook: Developing Strategies in Uncertain Times* (Mason, OH: Thomson, 2006), p. 25, 61.

“With proactive preparation, districts can manage the downside risk, and seize the upside opportunity that uncertainty creates.”

4. Make a Decision

Consider the steps that you would take under each scenario to further your strategic goals. With a grasp of the actions and outcomes that each scenario would entail, arrive at and communicate a decision.

A Strategic Approach to Uncertainty

Historically, districts have successfully navigated the future with an effective combination of intuition, experience, and analysis. However, the fiscal crisis, combined with unprecedented federal stimulus funds, have created a situation that requires school district leaders to employ a more rigorous set of tools in order to ensure that they can successfully navigate the future in a strategic and proactive way.

Scenario planning, an approach that has been successfully used in a variety of industries, can also be adopted by public school districts. By following the Four-Step Process for Scenario Planning, school districts should be ready, like Fairview Union, to confront change and think strategically whatever the fiscal crisis may bring. □

1 Mark Gongloff, “Land Mines Pockmark Road to Recovery,” *Wall Street Journal*, 8 June 2009.

2 Ibid.

3 Levels and descriptions taken from Hugh Courtney, *20/20 Foresight: Crafting Strategy in an Uncertain World* (Boston, MA: Harvard Business School Press, 2001); Hugh Courtney, Jane Kirkland, and Patrick Viguierie, “Strategy Under Uncertainty,” *Harvard Business Review*, November-December 1997; Hugh Courtney, “Decision-driven Scenarios For Assessing Four Levels of Uncertainty,” *Strategy & Leadership*, Volume 31, No. 1, January-February 2003; Hugh Courtney and Dan Lovallo, “Bringing Rigor and Reality To Early-Stage R & D Decisions,” *Research-Technology Management*, September-October 2004.

4 Hugh Courtney, “Decision-driven Scenarios For Assessing Four Levels of Uncertainty,” *Strategy & Leadership*, Volume 31, No. 1, January-February 2003.

5 Adapted from Bill Ralston and Ian Wilson, *The Scenario Planning Handbook: Developing Strategies in Uncertain Times* (Mason, OH: Thomson, 2006), p. 25, 61.

6 Ralston and Wilson, p. 25, 61.



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