Well-Designed for Worship

Thoughtful, tasteful, and functional technology will maximize the effectiveness of the new hymnal project.

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PROLOGUE

Predicting the future of technology is a fool's errand. Smart people have said dumb things about the topic. Take UCLA law professor Melville Nimmer for example. Reacting to the invention of the Xerox photocopier, he told Time Magazine, "The day may not be far off when no one need purchase books."[1] Nimmer was afraid people would go to the library and photocopy entire books instead of buying them. Of course, Nimmer's fears did not come true.

In 1982 the movie industry tried to put a stop to the VCR. Chief industry lobbyist Jack Valenti gave a frenzied testimony to Congress:

> *We are going to bleed and bleed and hemorrhage, unless this Congress at least protects one industry … whose total future depends on its protection from the savagery and the ravages of this machine.*[2]

He wasn't talking about the savagery of programming a VCR, but about the VCR itself. Fast forward to 2013 and you see that the movie industry has more than survived the perceived threat the VCR was supposed to have been.

Then there's my favorite example, which was the reaction of Microsoft CEO Steve Ballmer to the newly-released Apple iPhone. In a January 2007 interview Ballmer reacted by laughing heartily and saying, "Five hundred dollars fully subsidized with a plan! That is the most expensive phone in the world and it doesn't appeal to business customers because it doesn't have a keyboard."[3] Five years later the iPhone was worth more than the entire Microsoft Corporation.[4]

We can laugh at these sensationally wrong prognostications, but we should also carefully consider why people say such wrong things about technology. This is not just a case of the 20/20 vision that hindsight brings. Nimmer, Valenti, and Ballmer got it wrong because they focused only on the preservation of what they already knew. Fixated on the past, they failed to recognize that the technology they feared, opposed, and mocked was, in fact, amazing and transformative. Instead of asking, "What can we learn from this transformation to improve our business," they kicked against the pricks.

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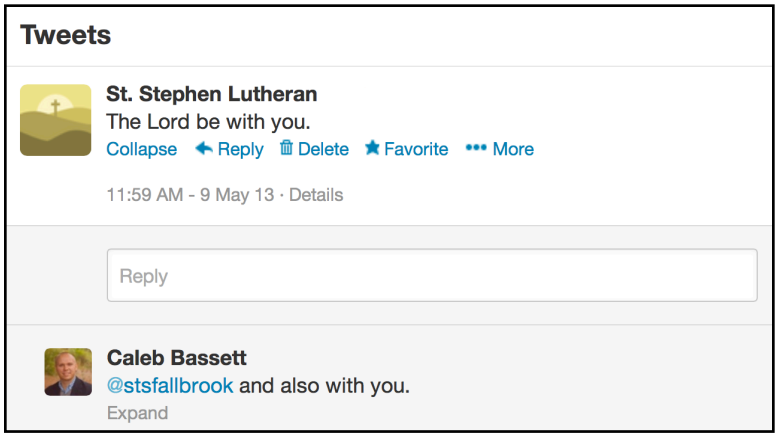
[1] "The Law: Copying vs. Copyright," *Time,* May 1, 1972, http://www.time.com/time/magazine/article/0,9171,877716,00.html

[2] U.S. House Subcommittee on Courts, Civil Liberties, and the Administration of Justice, "Home Recording of Copyrighted Works," April 12, 1982, http://cryptome.org/hrcw-hear.htm

[3] "Ballmer Laughs at iPhone," last modified Sep 18, 2007, http://www.youtube.com/watch?v=eywi0h_Y5_U

[4] David Goldman, "iPhone is bigger than all of Microsoft," last modified September 9, 2013, http://money.cnn.com/gallery/technology/2012/09/07/apple-iphone/index.html

Since worship touches the soul and stirs emotions, we ourselves get emotional (and even at times irrational) when we think of how worship could change. The thought of future worship shaped by technology might make us lash out like Valenti or laugh like Ballmer. I recently read an article about live tweeting worship.[5] The thought of live tweeting worship the way people live tweet the Oscars may evoke a deep discomfort in us. I'm not advocating that we live tweet the sermon, but if our first reaction is to laugh or angrily disregard how media and technology are changing the world we live in, then we relinquish some valuable power. Instead of capitalizing on available technology to shape our own future in a way that will support our mission, we allow the trends to shape us without any regard for our own goals and needs.



"Live tweeting" involves someone who is observing a live event providing rapid, real-time updates and comments about the event via Twitter. People may join in the conversation themselves from their own Twitter accounts.

You have asked me to share my vision for future technology in worship because I am on the Executive Committee of the new WELS hymnal project as Technology Chairman. The Synod has charged me with a wide range of duties for the project, from determining what role tablets may play in the final hymnal product, to researching the appropriateness and usefulness of a wide range of digital formats for our material. My goal is to discover and build effective and useful systems so that technology can play a ministerial role in the process of planning and executing worship.

If you were hoping I'd paint exciting pictures of iPads in every pew and robotic musicians that can play any instrument with all the mastery of a human virtuoso, I'm sorry to disappoint you. This paper is about current technology applied to build the future of worship in WELS. We aren't any better off with sensational predictions of the future, nor do we benefit from laments that technology will ruin worship. Instead we must recognize what technologies available today are transformative and discover how we can actively use the tools available to us for the improvement of Lutheran worship.

To prepare for this discussion, you must read seminarian Kent Reeder's senior thesis, "The Necessary, Relevant, & Practical Digital Media for the Development and Dissemination of a Worship Compendium in the 21st Century: A Hymnal Rebuild From the Cloud Down."[6] I base my own approach to the topic in this paper on the assumption that you have read and understood his thesis. His work is thorough, professional, and praiseworthy. His vision of a hymnal as a "digital worship compendium" is truly exciting. Reeder did what some academics, lobbyists, and CEOs can't: he recognized current technologies that are transformational and proposed a way to put those current technologies to use in service of Christians at worship.

You may wish to put this paper down until you are done reading Reeder's thesis.

[5] Frank Thomas, "Celebration and social media: a new form of call and response," New Media Project Blog, last modified April 30, 2013, http://www.cpx.cts.edu/newmedia/blog/new-media-project/2013/04/30/celebration-and-social-media-a-new-form-of-call-and-response

[6] www.wls.wels.net/files/Reeder.pdf

Shortly after I got on board with the new hymnal project, I received a list of guidelines and overarching principles for my area of responsibility. One of the guidelines was:

> *Do we need to survey the church body about a Web app for worship planning where all resources are available on a subscription/download basis or shall we assume that in this day and age we simply need to provide for this?*

I believe Reeder's thesis answers this question. There is no survey needed to determine whether a digital worship compendium and the accompanying software is necessary. We can be visionary simply by recognizing what is already in front of us. This day and age demands the sort of powerful digital worship compendium that Reeder describes. I wholeheartedly echo his vision of a digital worship compendium, especially the idea of a worship planning application. I think we can save valuable time by accepting that Reeder's thesis is valid. Therefore, I am advocating the vision of a digital worship compendium and accompanying planning application and proposing a framework for discussion and implementation.

THE FUTURE OF TECHNOLOGY IN WORSHIP IS AMBITIOUS

Concluding his thesis, Reeder wrote:

> *Obviously, the above proposal is significant. In an email conversation with an employee at OneLicense.net, his response was, "What you're looking at is ambitious, to say the least."*[7]

The vision of a digital worship compendium is indeed ambitious. In fact, Reeder may have spent several million future technology dollars by the time he was done with page 27. Nevertheless, accomplishing the vision of a digital worship compendium will bring real and worthwhile benefits to the worshiping Church in the 21st century.

To build a tool to deliver these benefits we must insist on impeccable design. Without a doubt this vision faces serious obstacles. Yet I believe our calling demands this sort of ambition, and we accept the obligation as a church body to make sure the vision becomes a reality.

Our calling demands ambition

One of my favorite passages in Scripture is Colossians 3:16, "Let the word of Christ dwell in you richly as you teach and admonish one another with all wisdom, and as you sing psalms, hymns and spiritual songs with gratitude in your hearts to God." The beautiful image of the Body of Christ building one another up in their daily prayers, in their speech to one another, and in their singing stirs my heart and yours. I love to worship, and you do too. I love seeing God's people gather where they can hear the Word of Christ and have the Word dwell in them richly, πλουσίως, in full abundance.

This Word is so important because only the Word and the sacraments it empowers are able to answer the soul's deepest problem. Each of us is sinful in ways that we are rarely

For the sake of consistency I will use the same terms and definitions in my paper that Reeder used in his thesis.

***Christians at Worship** - Those Christians, alone or together, actively engaged in direct and stated worship, be it public or private.*

***Codex Hymnal** - A printed, bound worship resource. Christian Worship: A Lutheran Hymnal and Christian Worship: Supplement are examples of codex hymnals.*

***Development Committee** – Those, either a group or an individual, who compile and create the resources of a worship compendium.*

***Worship Compendium** – The published product of the development committee's work. This term is used instead of "hymnal" to represent the whole, coordinated output of a development committee and to avoid confusion with the personal worship reference book alone.*

***Worship Coordinator** – Either an individual (i.e. pastor, teacher, staff minister, organist) or a committee; those who make decisions about the flow and content of a worship event.*

***Worship Event** – A context in which one or more Christians intentionally set aside time for direct, stated worship.*

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[7] Kent Reeder, "The Necessary, Relevant, & Practical Digital Media for the Development and Dissemination of a Worship Compendium in the 21st Century: A Hymnal Rebuild From the Cloud Down" (Senior thesis, Wisconsin Lutheran Seminary, 2013), 32.

able to fully grasp. The Lord is clear when he pronounces the unchanging consequence of sin, "You will surely die."[8]

In his grace and mercy, God sent the promised Savior to reconcile a dying world with the living God.[9] The Word (λόγος) made flesh dwelled among us,[10] and today in worship the significance of the incarnation is repeated daily and weekly as the Word (λόγος) of Christ finds dwelling within us through teaching, admonishing, psalms, hymns, and canticles.[11]

Do we not, therefore, have an obligation to build a hymnal filled with the best texts, rites, psalms, hymns, and canticles so that the Word of Christ may dwell richly in our people? Our labor contributes in a ministerial sense[12] to the salvation of souls. If we accept that this doctrine demands that we faithfully craft an excellent hymnal, do we not also have an obligation to build an effective, modern, and useful method to deliver it? I say yes. Our calling demands ambition, to say the least.

Available technology supports our ambition

I remember when it was a novelty just to get online. During my high school years I had to go to a special room filled with white boxes and heavy screens to use a computer with Internet access. Today the best computer I've ever used is a black rectangle in my pocket with almost instant access to a wide swath of the world's knowledge. What a change.

Even if there is no iPhone in your pocket, the Web is supporting your everyday activities, from your debit card transactions to public servants who use Web-based system to keep peace and order. Pastors and teachers rely heavily on Web-connected tools. I send dozens of emails a day. My task management app syncs between my Mac, iPhone, and iPad over the Web. My congregational leadership communicates and collaborates using a Web-based tool called Basecamp. My entire calendar lives in a Google server farm somewhere. This paper is stored on iCloud and is available at any time on all my devices, and I gathered editorial feedback for this paper using a Web-based collaboration tool. I read all my news and magazines not on paper but on the Web.

Polish poet, writer, and musician Piotr Czerski wrote a manifesto entitled, "We, the Web Kids." The work was translated and posted to the website Pastebin.com. He explained what it means that the Web is woven into the fabric of daily life:

Note that even the delivery method that Czerski chose to distribute his work is evidence of the changed assumptions about communication in today's world.

> *Web to us is not a technology which we had to learn and which we managed to get a grip of. The Web is a process, happening continuously and continuously transforming before our eyes; with us and through us. Technologies appear and then dissolve in the peripheries, websites are built, they bloom and then pass away, but the Web continues, because we are the Web; we, communicating with one another in a way that comes*

[8] Genesis 2:17

[9] 2 Corinthians 5:18, 19

[10] John 1:14

[11] Colossians 3:16

[12] Jonathan Hein, "Treasures in Jars of Clay, The Synergy Between the Instrumental and Ministerial Causes in God's Plan of Salvation," http://worshipandoutreach.org/paper/98/treasure-jars-clay

> *naturally to us, more intense and more efficient than ever before in the history of mankind.* [13]

I'm not a fan of sweeping generalizations like, "in the history of mankind," and Czerski's phrase, "we are the Web" strikes me as overwrought. His point is valid, though, that technological habits are forming, or already exist, which require us to think of a hymnal not in terms of a bound codex but as a Web-based digital worship compendium. For more and more people, getting our best and most useful information already happens on the Web. Our hymnal must operate the same way because that is what its users will expect.

> *Brought up on the Web we think differently. The ability to find information is to us something as basic, as the ability to find a railway station or a post office in an unknown city is to you.*[14]

The Web is not valuable in and of itself. The web is valuable because of the useful information and data to which it connects us. The ability to quickly find practical and relevant information at virtually any place and at any time is the transformational technology that we must harness as we build a digital worship compendium.[15] It's not enough to say, "Future generations will expect it." No, the "web kids" already have kids.

WELS is primed to lead

I attended my first WELS National Worship Conference in 2011. I was awestruck by the sheer number of people interested enough in worship to take a week out of their schedule and travel to a small town in south central Minnesota. The largest worship conference in the Western Hemisphere impressed representatives from the Lutheran Church - Missouri Synod (LCMS) too. Dr. Albert Collver, director of Church Relations and assistant to LCMS president, Rev. Matthew Harrison, wrote:

> *A significant percentage of WELS church workers (pastors and church musicians) attend the conference. This is remarkable considering the size of WELS (around 400,000 members) in comparison to the ELCA and the LCMS, not to mention other Protestant groups in North America. This shows in part WELS commitment to Lutheran worship.*[16]

We should build on that momentum. Our commitment to Lutheran worship flows from our commitment to the gospel of Jesus Christ. We believe in our hearts that speaking to one another with psalms, hymns, and canticles is a worthy expression of the Christian faith. Moved by the Spirit, we yearn for Christ's Word to dwell within us richly. By God's grace our hearts are in the right place. It is only natural, therefore, that we set the standard in Lutheranism for what it means to support excellent, Christ-centered worship in the 21st century.

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[13] Piotr Czerski, "We, the Web Kids," translated by Marta Szreder, last modified February 15, 2012, http://pastebin.com/0xXV8k7k

[14] Ibid.

[15] Kent Reeder makes the case very well that the codex hymnal, while still valuable and necessary today, does not live up to the possibilities and expectations that exist in the 21st century.

[16] Dr. Albert Collver, "WELS National Conference on Worship, Music & the Arts — Gustavus Adolphus College," last modified July 20, 2011, http://wmltblog.org/2011/07/wels-national-conference-on-worship-music-the-arts-gustavus-adulphus-college/

FUTURE TECHNOLOGY IN WORSHIP BRINGS REAL BENEFITS

If we are going to take the lead, reflect our love for the gospel, and build a modern digital worship compendium, what should it look like? The answer depends, first of all, on the work of the development committee. We need a corpus of excellent hymns. We need a range of singable psalms. We need rites that speak today's language and foster devotional piety. We need an excellent lectionary resource to guide worshipers through the year. We need supporting literature to educate and inform. Only when all that good work is done will everything be categorized, tagged, organized, and entered into the core of a digital worship compendium: the relational database.

The concept of a relational database can be difficult to understand. At its core, a relational database is a collection of data tables. Each table stores entities (e.g. a single hymn is one record or entity) and the metadata about each entity (i.e. key signature, meter). Think of an entity as a single row in a table. If you have 600 hymns then you have 600 rows, that is, 600 entities. The power of a complex relational database is not only in the entities themselves, it is the fact that multiple tables of data can be linked (or related) to one another.

Hymns

Hymn ID	Title	Author ID
1	Dear Christians, One and All, Rejoice	28
2	Come, Holy Ghost, Creator Blest	31
3	Lamb of God, We Fall Before You	48

Authors

Author ID	Name	Birth Year
28	Martin Luther	1483
29	Paul Gerhardt	1607
30	Martin Franzmann	1907

Let's continue using hymns as an example. We might be tempted to add "author" as metadata in our hymn table, but a more powerful solution is to make a new table of data called "Authors." This table holds a list of authors (with all the relevant author metadata) while the hymn records reference (relate) to the author records. This linking of data would allow a search query to bring up all hymns by a particular author. This is only a simple example, but by entering more complex data and relating those data sets to one another, a query could become more useful. The relationships in a database allow a user to tunnel through and filter out certain data. Reeder gave the following example:

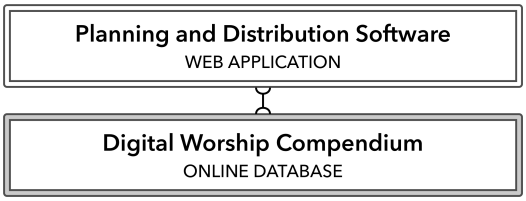
> *Typing Psalm 4 is a little on the broad side; try typing Psalm 4 and filtering by "piano" "guitar" "trending" "SATB" and "under 5 minutes." Now the list is manageable; now the list is ideal.*[17]

The relational database is the bottom layer of the technology stack. Like the foundation of a building, the database layer allows us to build more exciting things on top of the foundation. The database unlocks useful and beneficial possibilities. One of those is a planning application that will give worship coordinators useful access to the underlying data. For pastors, musicians, teachers, and worshipers this will bring many benefits. In fact, without some sort of software acting as a front-end to the underlying data, a digital worship compendium has little practical appeal.

By linking entities from separate tables with a common "key value," complex data becomes usable, searchable, sortable, and practical. In the above example, the single hymn, "Dear Christians, One and All, Rejoice" is linked to the author Martin Luther with a key value of "Author ID: 28." The system can now produce information not only about the hymn itself but about its author. This relationship now allows us to produce a list of, say, all hymns written by people born in the 15th century. That may not be a useful search in for everyone, but the point remains that a well-designed database structure facilitates almost any kind of query that one might find useful.

[17] Reeder, 32.

A digital worship compendium works for the pastor (or other worship coordinator)



The planning and distribution software is the usable service built on the foundation of the digital worship compendium, which is an online database. This is the basic technology stack for the project. Other useful projects may also be built on the same stack.

Three years ago I sat in an office labeled "Pastor" for the first time. I spent the first day of my ministry planning worship. As the weeks have turned to months and the months turned to years, I've continued to enjoy the worship component of my ministry.

During my years at Wisconsin Lutheran Seminary I saw a wide range of liturgical worship variety. It's no secret that we are training our pastors to plan and carry out excellent worship events. If we can use the topics of symposia at Wisconsin Lutheran Seminary as a sort of *Zeitgeist* for what is on the WELS mind, then it is safe to say that excellent liturgical worship is close to the top of our agenda.

This means more work though. Good variety adds painful complexity and administrative overhead. I have no trouble thinking that I'll add "special psalm arrangement" to my worship block plans, yet in practice that special psalm arrangement turns into a big job. First I have to decide what arrangement to use. Where do I look? I don't know. So I send an email to some other pastors in the circuit for ideas. Maybe I'll get a few options, but they will vary in quality and usefulness. Next, I need to find out what the psalms on my short list even sound like. Hopefully GIA Publications has an audio sample. Can my organist play this piece? Have I given them enough lead time to rehearse? And who is going to serve as the cantor? How about a duet? Now I have an organist and two singers who have to coordinate their busy schedules just to rehearse. And even if I get it all planned, I still need a way to keep track of all the moving pieces that have come into my life for no other reason than that I wanted to have a special arrangement of a single psalm. Complexity costs time and energy, which are precious commodities in the day-to-day ministry of a busy parish pastor.

Variety requires expertise too. Not every pastor can sit down at the piano and plunk out a melody to get a sense of how a piece of music sounds. Not every pastor knows where to look online for good worship resources, and even if they do know where to look, how do they sift the wheat from the chaff?

Some pastors have those gifts, and that's great. There are also talented musicians in congregations who assist their pastors and worship coordinators. I'm thankful to be connected to some of those pastors and musicians. My congregation benefits from their expertise, but those pastors and musicians are busy too. They can't spend all their time helping to plan worship for their own congregation and others'.

Worship planning, even to accomplish a baseline level of variety, requires a challenging administrative system to keep it moving. In addition to that special psalm arrangement, if I add an anthem and a gathering rite, then I begin to understand why pastors are tempted to just open the red book to page 28, sprinkle in a few hymns (and the Hymn of the Day is picked for you, by the way) and call it done.

If we are going to encourage pastors to adorn the gospel with beauty and grace through excellent liturgical variety, we should also provide an excellent planning tool to assist them in the process. We must design an application to mitigate the complexity introduced by liturgical variety so that our encouragement and training moves more easily from theory into practice.

Maybe you've got this all figured out. Maybe you have a full-time music minister who does the work for you. That's good for you, but what about the rest of us? (And what about that music minister who faces the same complex challenges?) It doesn't matter the

obstacle, if complexity is preventing a single worship coordinator from planning the best worship possible given the resources they have at their disposal, we need to remove that obstacle if we want liturgical worship to thrive through continual improvement.

A digital worship compendium works for the musician

A digital worship compendium and planning application will benefit parish musicians too. Such a tool could enable worship coordinators to manage personnel and service rosters. A musician could log in to the application and see a list of the dates on which he or she is playing. No longer do they need to lug a dozen volumes of music to and from rehearsal because with a click or a tap they will be able to print at home the copies of music they need. A central calendar reminds them to bring that lighter bag to a rehearsal this Sunday after church.

Choir directors could also interface with their singers by providing a portal where the group can listen to recordings of the pieces they are singing. The same calendar and service roster keeps everyone up-to-date on when and what they are doing to serve in worship.

Even more interesting is the possibility that musicians might browse the library of available songs and discover that there is a guitar arrangement of a hymn recommended for Pentecost 10, which happens to be coming in six weeks. Wouldn't it be great if they could go to the pastor or worship coordinator armed with that knowledge and proactively offer to accompany the song?

There are many tools available to help people manage schedules, communication, and collaboration. Such tools are helpful, but they are not able to connect to the core hymnal data. A planning application built on the underlying core data becomes more useful to the worship planner than a standalone planning tool.

A digital worship compendium works for Christians at worship

A digital worship compendium also helps Christians at worship, who will benefit from the increased variety, quality, and appropriateness of the selections included in the worship event. By relieving the pastor or worship coordinator from much of the complexity and administrative overhead involved in managing a healthy worship ministry, the digital worship compendium and planning application frees up time for more effective worship planning, and even presents better ideas to the worship planner. Christians at worship thirsting not for novelty but authenticity and variety will be thankful.

The stack approach to a digital worship compendium and planning application allows us to entertain some other interesting possibilities. In his excellent book on Lutheran spirituality, John Kleinig urges Lutherans to connect their personal prayers and devotions during the week to their worship on Sunday.

> *Our personal reading of God's Word and our meditation on it interacts with the public reading and exposition of the Scriptures. Our personal faith in Christ is included in the common confession of faith by the whole Church in the liturgy. The Prayer of the Church inspires our personal petitions and intercessions. Our family meals are joined with the Lord's Supper by the saying of grace. The interaction between these two domains*

> *produces a healthy liturgical spirituality. The more they intersect and interact, the richer our spiritual growth and the deeper our spiritual maturity.*[18]

Devotional resources related to the lectionary could be made available to worship planners. By printing these resources or distributing them electronically, a pastor could use a centrally prepared devotional guide that Christians at worship could use throughout the week to guide their prayers and devotions. Devotional and educational content directly related to Sunday worship could be syndicated to congregational email lists via RSS. Over time, worshipers could gain a deeper appreciation of the relationship between the Gottesdienst and their lives of worship and prayer. Chapel plans and liturgies could also be developed to tie the Sunday service to the devotional and worship life of the Lutheran elementary school. The impact of the hymnal as a digital worship compendium would be felt not only in the sanctuary on Sunday but in the classroom and home during the week.

A digital worship compendium will magnify the effectiveness of the hymnal itself

I remember how Professor Paul Zell illustrated his love for printed books. "Close your laptops," he would say as he slowly opened the Pillar commentary in his hands and brought it to his nose. Inhaling deeply, Professor Zell would comment on how much he loved the smell of a good book.

I love printed books, too. I like the feel of great paper and the look of beautiful typography. One of my favorite books to read and look at is a book about making books. But, as much as I love printed books, I still buy most of my books in a digital format.

The book is "Elements of Typographical Style." The book will be of interest to anyone involved in producing printed works.

I own these digital editions because the utility of a digital format magnifies the effectiveness of the text. I can copy and paste. I can highlight and make notes. I can search within the text. In some applications (like Logos) I can even cross reference my materials instantly. It does pain me that typography and layout on the screen does not compare to the beauty of the printed page, but we can forgive that flaw by remembering that the printed page has a head start measured not in years but centuries. Nevertheless, a digital edition brings benefits to the table that a codex edition simply cannot, and that makes the compromise on beauty worthwhile.

The introduction of super high-resolution displays (e.g. Retina Display) brings hope that digital typography could improve quickly.

Reeder has made the case that a codex hymnal is not suitable as the only product of a hymnal development committee in the 21st century. I agree. Yes, we will want and need a printed and bound codex version of the hymnal. Not every church is ready to go without a printed hymnal in the pew. Those who use hymns as companions to their prayers and devotions will still desire a printed and bound codex. I do not think a digital worship compendium and its accompanying applications should be designed to replace the book. Instead, it should magnify the effectiveness of the entire project by presenting the core data in as many useful ways as possible, be it a planning application, a music library, a devotional resource, or a number of specialized paper books. Ideally, we'd have all of the above. In so doing, we will transform the hymnal from a bound reference system to a living, breathing application that grows, changes, adapts, and improves over time.

Reeder proposes that several specialized volumes be printed. Perhaps one of those volumes will be a devotional hymnal for home use, or for distribution in the pew racks of congregations that print the entire service in a worship folder each week.

[18] John W Kleinig, *Grace upon Grace* (St. Louis: Concordia, 2008), 68-69 Kindle edition.

FUTURE TECHNOLOGY IN WORSHIP REQUIRES IMPECCABLE DESIGN

Doesn't every paper require a touch of Latin? Here's some: *De gustibus non est disputandum*. That's a Latin maxim which says, "There's no arguing taste." The point of the maxim is something like this, "Whether you like something or not is a purely subjective matter, so there's no point arguing about it."

When most people say something is "well designed" they usually mean "I like it." Appeal comes from something that is aesthetically pleasing to the senses, be it the eyes, or ears, or sense of touch. Everything we look at is the expression of someone's personal sense of taste. Even nature is an expression of God's taste. Some tastes we agree with, others we don't. The problem is that the opinion, "I like it" or "I don't like it," is not easily debatable. There are no set criteria or data structures that exist to evaluate whether your liking something that I don't like is a valid position to hold. Some people like Elvis on velvet, even if such a work is pure kitsch.

Too many discussions about worship have degenerated into arguments of taste. Those arguments have not helped. In the same way, too many discussions about design have degenerated into arguments only of taste. But design is not just about taste. Design is actually taste applied to function. American inventor and designer Steve Jobs put it this way:

> *[Design] is not just what it looks like and feels like. Design is how it works.*[19]

Design is, first and foremost, practical. It has to work. Yes, a designer must have good taste, because anything that works well should also look good. But the first job of design is to make something work and work well. Only when it works should a designer begin to make it look nice. A tool that works well but looks ugly is better than a tool that looks great but has fundamental operational flaws. That's why future technology in worship requires impeccable design. When we build a digital worship compendium and the accompanying software, it must be well designed in the technical sense of the word. It must work well. To make this a reality we must follow a proven design process.

Craigslist is one of the ugliest websites on the Web, but it does its job very, very well.

[19] Rob Walker, "The Guts of a New Machine, *New York Times Magazine*, November 30, 2003, http://www.nytimes.com/2003/11/30/magazine/30IPOD.html

Design is a proven process of solving problems

Design is, therefore, a process of problem solving that leads from thorough research to meticulous planning and finishes with excellent execution. The design process begins when there is a problem that requires a practical solution. Usually the problem arises from a set of constraints. These constraints may be materials or budget (e.g. it must be cheap, it must work with our existing system), audience (e.g. for kids, for an international audience, for experts), or organizational requirements (it must use the official logo, it must address current market, it must be contiguous with past efforts). In our case, the problem to be solved is largely the administrative complexity involved with our increased use of liturgical variety.

Thorough research

As I lead my Technology Committee through the design process, our first step is to understand the goal of the project. Whether the project is an entirely new initiative or an iterative update to an existing project, understanding what the goals are is critical to the final outcome. Designers must first ask, "Why are we doing this?"

Once goals are clearly articulated, designers must gather information through research. Research is like a site survey done before a building project. Unless you know the lay of the land, you can't design a solution. The research phase may be the most time-consuming part of this project.

Research is worth the time because only through research will we learn what is the real work that people will expect the digital worship compendium and planning application to do. Design is, therefore, an ongoing discussion. If the design process isn't tied to real world reactions and testing, designers can easily end up with a solution that doesn't solve the actual problem.

Meticulous planning

Design doesn't just create a different system to present the same complexity. Sometimes you'll hear the suggestion that we need only a "clearinghouse" for resources, as if a loosely structured, all-you-can-eat buffet of digital goodies is somehow an effective way to convey information. That's not good design. Good design actually takes complexity and refines it, or even hides it. Good design gives people access to all the complexity and power they need to do the real work, but only at the right time and in the right context.

To do this, good design hides complexity by creating a user interface. A user interface is "a place where two things meet: the human and the computer."[20] Too often technology is applied as a solution because the computer can do something but it's not actually addressing what the human being wants to do. That's bad design and bad interface. Only with the information gathered through research and the meticulous planning of an interface can we design a solution that pairs what a computer can do with what a human wants to do.

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[20] Ryan Singer, "What UI really is," last modified March 30, 2013, http://feltpresence.com/articles/19-what-ui-really-is-and-how-ux-confuses-matters

Excellent execution

Without excellent execution of the product all the hard work of research and planning goes to waste. You can hire the best architect in the world, you can prepare the site with the best team of professionals, but if the contractor who oversees the actual construction botches the job everything will look awful.

This is where designers pair the science of research with the artistry of a maker. Designers who have thoroughly analyzed the problem and understand it well are able to impose order. They are even able to create novel forms and methods to address the problem in ways people may not have expected. In short, they build an experience that, if done well, brings the user a feeling of delight that a system could solve their problem so well, so elegantly, and so beautifully. Delight, elegance, and beauty must be our goal. Anything less is unacceptable.

All this talk of good design may seem obvious, but it really is not. It is easy to cut the design process short by either underfunding it or not allowing the team the appropriate time and flexibility to build what is needed. The consequences of shortchanging the process can be devastating to the final product.

If what we build gives people a terrible and frustrating experience, then we will have failed. Even if a digital worship compendium could, technically speaking, deliver the material we want, if it in any way makes someone dread the thought of using the product on a regular basis, then the product will be a failure. There will be the temptation to use the content of the hymnal as a sort of club to force people to use whatever we build. "If you want this stuff, you have to use this awful tool we built, and no, it doesn't work on your new computer, please use an older one." That would be rude. The digital worship compendium and planning application must delight the people who use the system.

In an article written three days after the public debut of the iPad, Scottish educator Fraser Speirs commented about the "volume and vehemence of apparently technologically sophisticated people inveighing against the iPad." Calling their response, "future shock," Speirs went on to explain how technologically sophisticated people often insist on complicated solutions that don't actually address the real needs of users.

> *The tech industry will be in paroxysms of future shock for some time to come. Many will cling to their January-26th notions of what it takes to get "real work" done; cling to the idea that the computer-based part of it is the "real work."*
>
> *It's not. The Real Work is not formatting the margins, installing the printer driver, uploading the document, finishing the PowerPoint slides, running the software update, or reinstalling the [operating system].*
>
> *The Real Work is teaching the child, healing the patient, selling the house, logging the road defects, fixing the car at the roadside, capturing the table's order, designing the house and organizing the party.*
>
> *Think of the millions of hours of human effort spent on preventing and recovering from the problems caused by completely open computer systems. Think of the lengths that people have gone to in order to acquire skills that are orthogonal to their core interests and their job, just so they can get their job done.*[21]

The term "orthogonal" refers to right angles. Speirs' point is that bad technology often forces us to learn unrelated skills just to do our work.

[21] Fraser Speirs, "Future Shock," last modified January 29, 2010, http://speirs.org/blog/2010/1/29/future-shock.html

Our digital worship compendium and planning application must focus on the "real work" of worship. We must completely understand the real needs of worship coordinators and the Christians at worship that they serve so that we can build an elegant and effective solution that doesn't require people to learn an entirely orthogonal [Define "orthogonal"?] skill set just to get their job done.

The product mentality asks first and foremost, "What's best for the user?" As long as we are asking that question and answering it honestly our digital worship compendium will do well.

The Technology Committee and its process

As of today my Technology Committee is empty, although I do have a good idea of what kind of people I want on the committee. I'm looking for the kind of people who understand, support, and appreciate worship and good technology design in service of worship. The seats I'm hoping to fill are as follows:

- **Parish pastor** — a pastor who is active in good, liturgical worship who uses technology creatively and in a ministerial role
- **Music teacher** — a music teacher who is also active in good, liturgical worship who uses technology creatively and in a ministerial role
- **Application or database developer** — a technology professional who uses modern tools, has good taste, and has built great stuff
- **Web developer** — a technology professional who exhibits the same traits as the above and also brings expertise and experience building useful Web applications
- **Two church musicians** - called or lay musicians who are fluent in digital music formats, distribution, and copyright issues

Do you know someone who would fit well on this committee? Please tell me who they are and how I can be in touch with them. Do you have a suggestion for another position I should add? Please give me some feedback.

For the research and planing phase I am looking for a focused and interactive approach. I want our committee to discover 25 congregations who represent the ideal target for our planned digital worship compendium and planning application. These congregations should represent the vast middle of WELS and not edge cases. Their needs are common and also specialized. Their culture demands excellence and so we must provide the best. Their active worship ministry means that they struggle with the kinds of challenges we are working to solve. They are comfortable using current technology to serve their congregation. Their needs, their experience, and their feedback will give us the information we need to build something for them. By building something that works for those 25 congregations we build something that works for everyone.

Do you know of congregations who would be a great fit for this list of 25? Tell me who they are so I can be in touch with them.

FUTURE TECHNOLOGY IN WORSHIP FACES STEEP CHALLENGES

> *"As iron sharpens iron, so one person sharpens another."*[22]

I have commented on the value of this proposal and the process I believe we must follow. I'd like to also discuss some of the most challenging obstacles I see standing in the way of the excellent execution of a 21st century digital worship compendium and planning application. I present these challenges as a mixture of observation and candid opinion in order to get feedback from you to help me understand what I'm overlooking, misunderstanding, or naïvely assuming.

I'd like to approach these challenges by posing a question, "What will people stop doing when they use our product?"

> *Habit, momentum, familiarity, anxiety of the unknown – these are incredibly hard bonds to break. When you try to sell someone something, you have to overcome those bonds. You have to break the grip of that gravity.*[23]

What are the sort of bonds we have to break to make the ambitious vision of a digital worship compendium possible? Where do habit, momentum, familiarity, and anxiety of the unknown work against us?

Budget

As of today, there is no budget allocated for building this kind of tool. The current budget covers project direction, administration, music engraving, and publishing. We must accept that the project is already underfunded, and by a large margin. How much money would be required to build a digital worship compendium? I don't know the answer yet, but I believe the answer to that question depends on how we address our other challenges.

Talent

A digital worship compendium and planning application will require some serious talent to build. The vision is simple in concept, but not in execution. For example, it is one thing to say, "An editable worship folder, in Microsoft Word or another word processing format, should be able to be produced with a simple click,"[24] but it's another thing to actually build it. That feature alone would require some serious development time and talent to build, let alone to do it well. To build a competent digital worship compendium and the accompanying worship planning application could easily require a staff of six or seven, possibly working full time for at least a year or more:

What we decide not to do will define the success of this project as much as the things we agree to do.

- Design director, with executive design authority
- Researcher and strategist, charged with gathering all the required information to design an appropriate solution

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[22] Proverbs 27:17

[23] Jason Fried, "What is someone going to stop doing when they start using your product?" last modified February 6, 2013, http://37signals.com/svn/posts/3423-what-is-someone-going-to-stop-doing-when-they-start-using-your-product

[24] Reeder, 27.

- Database developer, an expert in designing the data structures required to support a data set of this scale
- Web application developer, an expert in PHP and MySQL or Ruby on Rails who would build the application layer on top of the database layer
- Interaction and experience designer, who would design the user interface (based on usability testing in the field).
- A visual designer with skills in layout, graphic design, and HTML and CSS to build the visual look
- A project manager, who will oversee the overall development process and manage budgeting, staffing, and progress tracking

I'm hopeful that we can build the proposed system with a smaller team. Perhaps budgetary constraints will require it. But let's not pretend devoting fewer resources in manpower to the project will still produce something that effectively delivers the hymnal to a 21st century audience.

One solution is to outsource the entire project to a vendor or consultant. I have reservations about that method. Vendors don't necessarily share our values, and they are expensive. I also believe the nature of this project requires an ongoing team of people who are internally motivated to build something great for the Church and not just for a client.

Finding (and funding) the right talent will be critical to the success of this project. It may be possible for me to fill the Technology Committee with talented individuals who could do a lot of the application development work. The committee can do much of the legwork when it comes to the design of the data structures and the user interface. However, I am not convinced that we can build a tool to match the vision on volunteer labor alone.

Pastoral habits and expectations

We may face a challenge in the form of pastoral habits and expectations. It seems that there are as many ways to manage worship planning as there are pastors. Some use a Word template; others use a simple notebook. Still others have built complex relational databases for themselves. Our product must be so good that it makes virtually every pastor wish he were using our system instead of his own, home-grown system.

I'll comment more on this later, but pastors will have to understand that a digital worship compendium will almost certainly not be a one-time purchase. Instead, the digital worship compendium will require a monthly or annual subscription fee. I submit that we pastors are probably more fascinated with the word "free" than most segments of society. We often unfairly impose onto others our sense that anything done in the service of the Church should be free (with the notable exception of our own time and salaries). We easily forget that free products don't last very long. We set the tone in our congregations, therefore we should start setting a tone that appreciates (and pays for) value.

Organizational gravity

Major decisions in an organization are often based upon a top-down, organizational checklist. The question of "what's best for the user" has a hard time surviving the

boardroom. This happens with technology too. Maybe you've dealt with organizational prohibitions from using a better Web browser or installing useful software. There will be reasons why the system we are looking to build doesn't fit into one or more current templates for how we usually do things. The vision for a digital worship compendium and planning application as a self-sufficient product is clearly outside of standard organizational expectations in WELS. Will the hymnal project team be allowed to build something independently and with sole focus on the user?

The same concept applies to the gravity of a business model. We haven't made any decisions yet, but I don't foresee any scenario except that congregations will have to pay for the digital worship compendium with monthly or annual fees. The subscription model makes a lot of sense. Subscriptions provide a steady income stream for the ongoing development of the application. They also provide value to the user. A monthly fee gives you full and total access to the entire library and all the accompanying planning tools. That's a great value.

An ongoing stream of income to support the project is also important because a Web service requires long term support. A Web service lives on Web servers, which require maintenance, upgrades, and migrations. It doesn't have to be expensive, but it does cost something. We also have to consider who will fix bugs in the software, add new features, and refine the product over time. In fact, I don't see any way that a digital worship compendium can be successful without treating it as an ongoing, salable product. A Web application is very different than a book. Publishing a book is a very front-loaded process. There is the writing process, the editing process, the typography and layout process, the proofing process, the printing process, and then it's time to sell the book. After the book is published, there is not as much work left to do. Maybe there are some revisions to the book along with a second or third printing. For the most part, once the ink is on the page, the book will decline in value either because of its physical condition or because the information on the pages became outdated.

A digital worship compendium delivered as software can actually get worse over time if the software is not continually improved and iterated. I can't imagine releasing a web application in 2024 and just letting it go untouched until 2034. I said before that a digital edition of the hymnal would magnify the value of the development committee's work. The opposite could happen if we don't tend to what we create. The system could get worse over time, or even close entirely.

We may have to convince a wide swath of frugal Lutherans that such a tool is worth the price, and educate our constituency that such a tool requires ongoing attention, but I think that is well within the realm of possibility. We may also have to relinquish some institutional control so that that a new business model can emerge, one with autonomous control over the product and genuine, focused interest on making and keeping the product excellent.

Curation and Revision

Curation refers to the process of selecting, organizing, and tending to the items in a specific collection.

Up until this point I've focused on practical challenges like execution, marketing, business models, and control. I think we may also face a major philosophical hurdle. Who will manage the ongoing curation of the digital worship compendium data after the work of the development committee is done? Who will decide when and which new hymns, psalms, or rites should be added to the digital worship compendium. Will we do that work every 15-20 years? I don't think that fits the character of a 21st century digital worship compendium.

And how much influence should the curators exert over worship in WELS? Is WELS comfortable with the idea that, if the digital worship compendium and planning application strongly suggests a particular rite, psalm, or hymn for a particular day, that a large segment of WELS congregations will follow the lead? Do we want that? What if someone feels that power is in the "wrong" hands or is leading in the "wrong" direction? What if we harness the data of all the worship plans entered into the system to tell people what the most popular or trending hymns are this month? Will there be a herd mentality?

Personally, I think such a system would be beneficial. In reality our worship today is already guided by a central planning process. We know our liturgies by their page numbers, do we not? Is that not the influence of a central development committee? A digital worship compendium simply makes the guidance of worship in WELS more fluid, active, and, I think, more useful. In the Arizona-California District, the District Commission on Worship members regularly produce worship recommendations. The Institute for Worship and Outreach also releases similar material. These plans are thorough and incredibly practical. I would love to have that kind of guidance in my weekly worship planning year round. I also think an active worship pedagogy through a centralized planning tool will be good for WELS as a whole. If our worship shared even more commonality [do not picture people walking in lock step, but a large crowd of people enjoying the same thing], would that be a bad thing? When a member from my congregation talks to a friend from a nearby congregation and they share a common worship experience, wouldn't I consider that to be a good thing?

FUTURE TECHNOLOGY IN WORSHIP IS WORTH THE EFFORT

New ideas are seducing. That's why I have such a hard time learning to say "no" to new projects. It's because my mind can see the positive outcome of a new idea without fully realizing the amount of time, energy, and effort the outcome will require. I'm good at seeing the "why" of a project, but it's hard to understand the "what." I'm not alone in that tendency. Psychologist Heidi Halvorson explains:

> *Because we are biased to think about future events more in terms of why we want to do them and less in terms of how we'll actually get it done, we adopt goals and plans with potentially rich rewards that are also logistical nightmares.*[25]

Halvorson goes on to explain that a healthy mix of "why" and "what" thinking leads us to a healthy understanding of our work. We know "why" we do it, which provides outstanding motivation. We also think about "what" we have to do, which keeps us grounded in reality. As I wrote this paper there were several times the "what" of this project hit me like a ton of bricks. I've already had my share of mild panic attacks as I've surveyed the magnitude of this vision. These are awesome ideas, but do we have the stomach to make them reality? Consider another thought from Jobs:

> *[There is] the disease of thinking that a really great idea is 90% of the work. And if you just tell all these other people "here's this great idea," then of course they can go off and make it happen.*
>
> *We can't just slap each other on the back and congratulate ourselves on coming up with a great idea. We have to ship this product.*
>
> *The problem with that is that there's just a tremendous amount of craftsmanship in between a great idea and a great product. And as you evolve that great idea, it changes*

[25] Heidi Halvorson, *Succeed* (New York: Penguin, 2010), iBooks edition.

> *and grows. It never comes out like it starts because you learn a lot more as you get into the subtleties of it. And you also find there are tremendous tradeoffs that you have to make. There are just certain things you can't make electrons do. There are certain things you can't make plastic do. Or glass do. Or factories do. Or robots do.*
>
> *Designing a product is keeping five thousand things in your brain and fitting them all together in new and different ways to get what you want. And every day you discover something new that is a new problem or a new opportunity to fit these things together a little differently.*
>
> *And it's that process that is the magic.*[26]

I would be deeply disappointed if, in ten year's time, the vision I've advocated in this paper has not been realized. The vision is ambitious, the benefits are awesome, the process is sound, and the challenges are steep. But this is all very doable, and, thankfully, I won't be doing it alone. God-willing, I will have a committee equally as committed to this project as I am. With more and more people putting their mind to the project, smart solutions will come to the surface. Your discussion of this topic today is the starting point. I want feedback, ideas, thoughts. What do I have right? What do I have wrong? Where am I being naïve? Where have I challenged you? Tell me, because I want to hear.

I will be the first to tell you that there are things in worship that plastic and glass can't do. They are not bread and wine. They are not water. They are not Christ's body and blood and precious washing of rebirth. All this technology is nothing if it doesn't help pastors connect people to the Means of Grace in worship. In fact, that must be our chief goal and purpose. We have every reason to connect more and more people to the power of the gospel, and we live in a period of history in which amazing technologies that help us to accomplish our mission and ministry are readily available. Naturally, it will not be easy. Even without the challenges of budget and changing habits, such a tool will be technically difficult to build. However, we have been blessed with the resources and talent in our church body to actually get this project done.

Christian Worship Supplement was published in 2008. It brought to wide use a great variety of excellent hymns. These were, for the most part, hymns that many in WELS would have not known about if it were not for the work of the Supplement Committee. WELS saw value in producing more and more great worship materials.

On Maundy Thursday 2013 my grandmother went to heaven. The family gathered for funeral worship. My grandfather has a deep love for hymnody. He helped make *Christian Worship: A Lutheran Hymnal*. Yet three of the four congregational hymn he selected came from Christian Worship Supplement. We sang, "Speak, O Lord," "God's Own Child, I Gladly Say It," and the THAXTED setting of "Jerusalem, the Golden." I don't think those hymns would have been on the hymn board at St. John's Lutheran Church in New Ulm that day if it were not for the fact that WELS saw the value in producing and distributing current, high quality, and timeless materials for use in Lutheran worship.

A thousand baptisms, weddings, funerals, confirmations, anniversaries, Christmases and Easters all testify that this ambitious vision of creating a digital worship compendium is worth the time, expense, and effort. We will bring the power of Lutheran worship and its life-giving focus on the Means of Grace to as many people as possible. This vision for a living, breathing digital worship compendium is cut from the same cloth as our love for the gospel. It's time to design the future of worship.

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[26] Philip Elmer-DeWitt, "Steve Jobs: The parable of the stones," *CNN Money*, November 11, 2011, http://tech.fortune.cnn.com/2011/11/11/steve-jobs-the-parable-of-the-stones/

QUESTIONS FOR DISCUSSION

1. Make a list of several challenges we face in communicating this vision to the WELS at large.

2. Design is a process of working through constraints to arrive at a solution. Will it be possible to remove some of the constraints the project faces to free up valuable time for better design and implementation? If so, what are those constraints?

3. If we could only do three major technology initiatives related to the new hymnal project, which would they be? Prioritize your list.

4. To what degree do we wish to fill the digital worship compendium with materials that would not make it into a print edition? In other words, how much *extra stuff* do we want to publish?

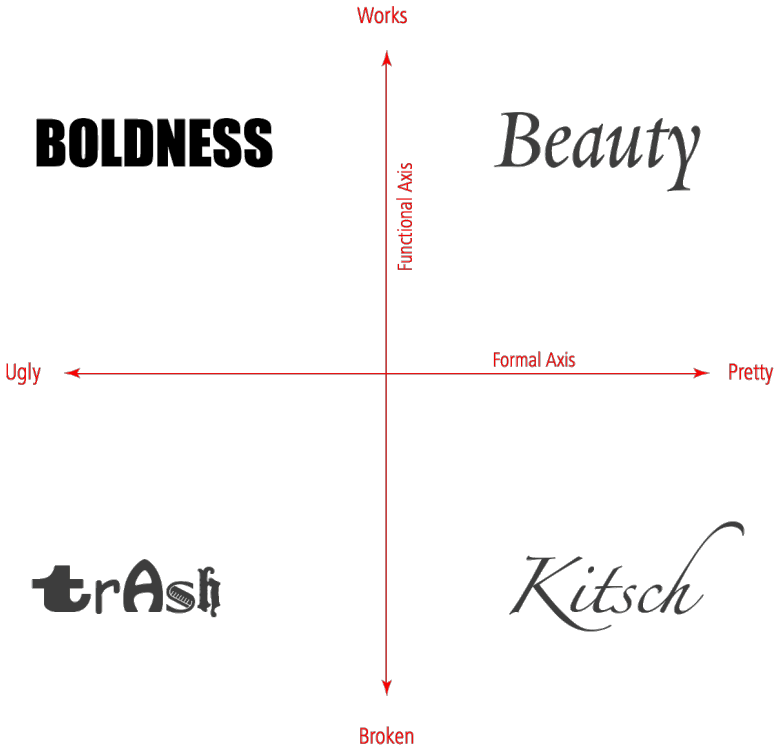
5. Will it be possible to gain a budget for the technology portion of the hymnal project? What methods and channels do we have available to increase funding?

6. What parts of this vision do you endorse? What are your disagreements?

7. Is a product-focused, user-oriented mindset possible in our organizational culture?

8. Entertain the possibility that a fully-digital hymnal may gain wide adoption outside of WELS. Shall we consider this a side-effect or something for which we should strive?

9. Discuss the chart below by identifying some digital tools you use and plotting them on the graph. In which quadrant do we want our hymnal and its technology to be?



Source: Oliver Reichenstein
http://ia.net/blog/learning-to-see/