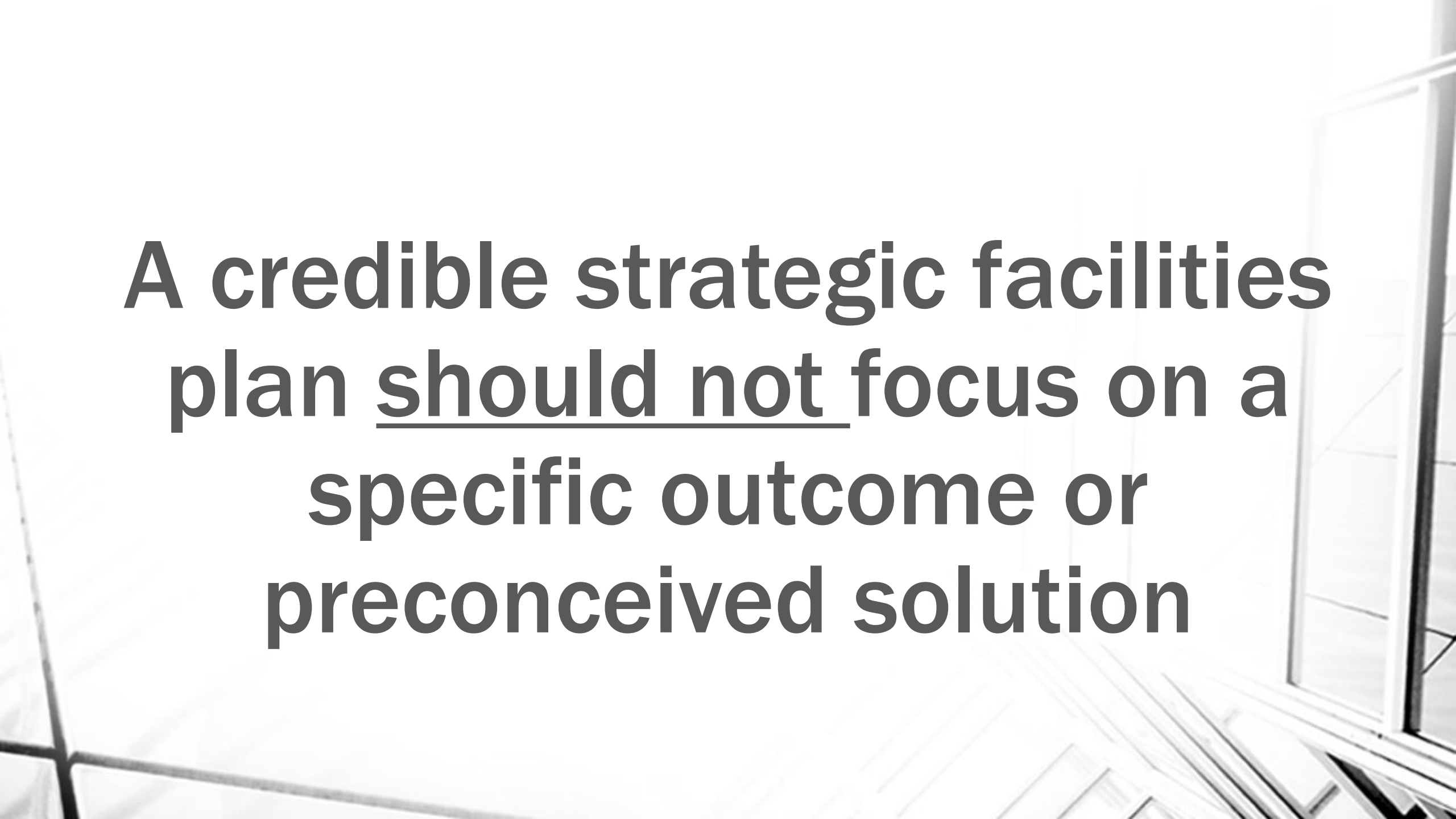
Long Range FACILITIES PLANNING

School District No. 8
Public Presentation #2
November 26, 2014
Salmo

Board's Visioning

- Why is a facilities plan necessary? What should it accomplish?
  - Provide best learning environment for students
  - Sustainability and stability
  - Renewal
  - Better, more pro-active delivery of services to students and stakeholders
  - More competitive, effective organization
  - Provide best workplace for employees
  - Lower the cost of ownership
  - Transfer of $$ from operations & capital to classrooms
  - Other


A credible strategic facilities plan should not focus on a specific outcome or preconceived solution

Key Stages

Understanding	Analyzing	Planning	Acting
District Goals	Data	Decision Making	Implementation
Student Expectations	Scenarios	Phasing	Feedback
Achievement Gaps	Learning Impact	Flexibility	Evaluate
Departmental Strategic Plans	Business Case		Adjust
Existing Facilities			

Data – What do we know about SD8?

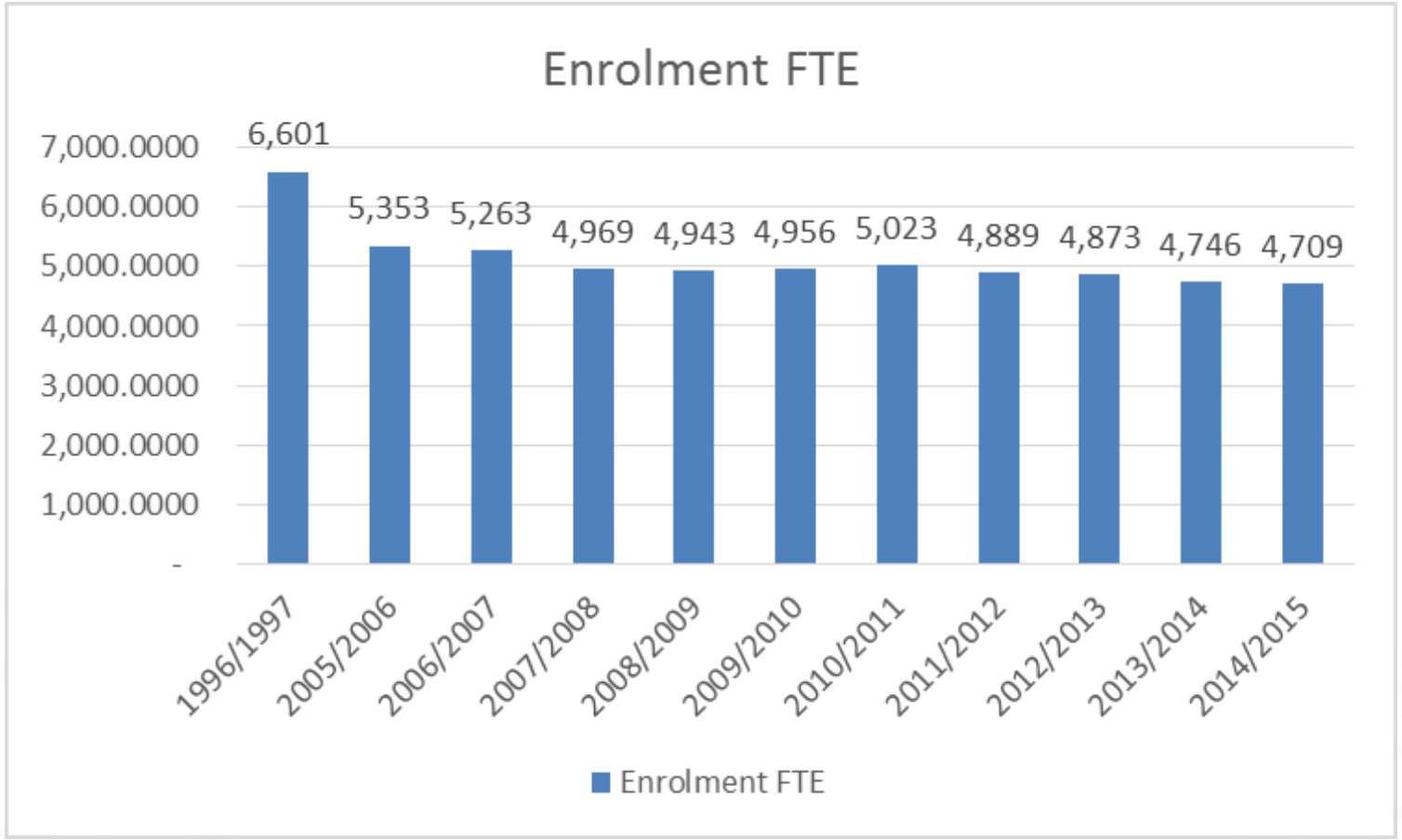
Inventory

- 91,900 square metres
- Schools
  - 13 Elementary Schools
  - 4 Secondary Schools
  - 3 K-10 or K-12 Schools
  - 1 Middle School
  - 3 Programs of Distributed Learning in 5 sites
  - 4 Learning Centres
- Administration Sites - 6
- Closed Sites – 7
- Vacant Land - 4

Asset - Asset Name	Asset - Year Constructed
Central Elementary	1908
Hume Elementary School	1923
Trafalgar Middle School	1924
Adam Robertson Elementary	1938
Jewett Elementary	1946
Mount Sentinel Secondary	1950
W.E. Graham Community School	1950
Salmo Elementary School	1953
Board Office Creston	1955
Kaslo Maintenance Building	1955
LV Rogers Secondary	1956
Yahk Elementary	1956
South Nelson Elementary	1960
Canyon/Lister Elementary School	1961
AI Collinson Elementary	1962
Blewett Elementary School	1962
Board Office - Nelson	1962
Rosemont Elementary School	1962
Homelink Centre (formerly South Creston Elemer	1964
Board Office - Creston	1965
Bus Garage/Maintenance Creston	1969
Maintenance Building Nelson	1970
Gordon Sargent Primary School	1971
Maintenance Building #2 Creston	1975
Brent Kennedy Elementary School	1977
Winlaw Elementary School	1978
Classroom Annex, Prince Charles Secondary	1982
Prince Charles Secondary	1983
Bus Garage District Nelson	1985
Redfish Elementary School	1987
J V Humphries Elementary/Secondary School	1994
Erickson Elementary	1996
LVR Care To Learn, Daycare Centre	1996
Salmo Secondary School	2004
Crawford Bay	2010

Asset - Asset Name	Asset - Year Constructed
Central Elementary	1908
Hume Elementary School	1923
Trafalgar Middle School	1924
Adam Robertson Elementary	1938
Jewett Elementary	1946
Mount Sentinel Secondary	1950
W.E. Graham Community School	1950
Bus Garage District Nelson	1985
Redfish Elementary School	1987
J V Humphries Elementary/Secondary School	1994
Erickson Elementary	1996
LVR Care To Learn, Daycare Centre	1996
Salmo Secondary School	2004
Crawford Bay	2010

Enrolment


Enrolment FTE
7,000.0000
6,000.0000
5,000.0000
4,000.0000
3,000.0000
2,000.0000
1,000.0000
-
6,601
5,353
5,263
4,969
4,943
4,956
5,023
4,889
4,873
4,746
4,709
1996/1997
2005/2006
2006/2007
2007/2008
2008/2009
2009/2010
2010/2011
2011/2012
2012/2013
2013/2014
2014/2015
Enrolment FTE

Capacity Utilization

- Calculates the % of space utilized
- Indicates empty seats
- Capacity Utilization = $\frac{\text{Headcount}}{\text{\# of Spaces (Nominal Capacity)}}$

Summary of Utilization

Summary of Capacity Utilization					
Family of Schools	**2011/2012**	**2014/2015**	**2018/2019**	**2022/2023**	**Empty Seats (22/23)**
District	75%	71%	73%	75%	1,490
Creston	74%	68%	73%	74%	431
Salmo	60%	56%	64%	71%	134
Kaslo/Crawford Bay	55%	49%	51%	48%	330
Slocan	76%	72%	71%	75%	243
Nelson	84%	83%	81%	84%	352

Salmo Family of Schools

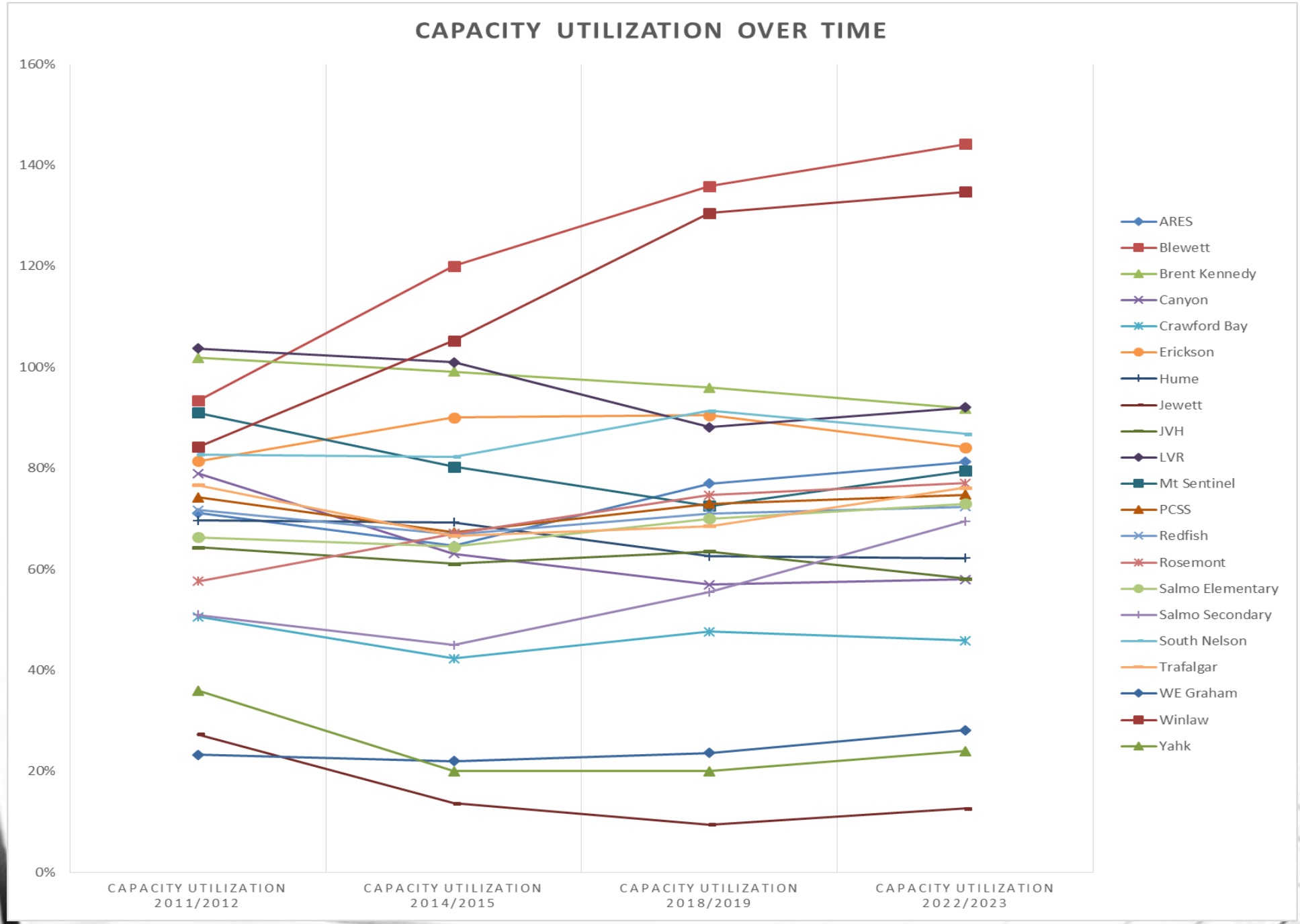
Year	Headcount	Nominal Capacity	Capacity Utilization	Empty Seats
11/12	281	470	60%	189
12/13	270	470	57%	200
13/14	278	470	59%	192
14/15	264	470	56%	206
15/16	268	470	57%	202
16/17	286	470	61%	184
17/18	298	470	63%	172
18/19	300	470	64%	170
19/20	314	470	67%	156
20/21	326	470	69%	144
21/22	333	470	71%	137
22/23	336	470	71%	134
23/24	343	470	73%	127

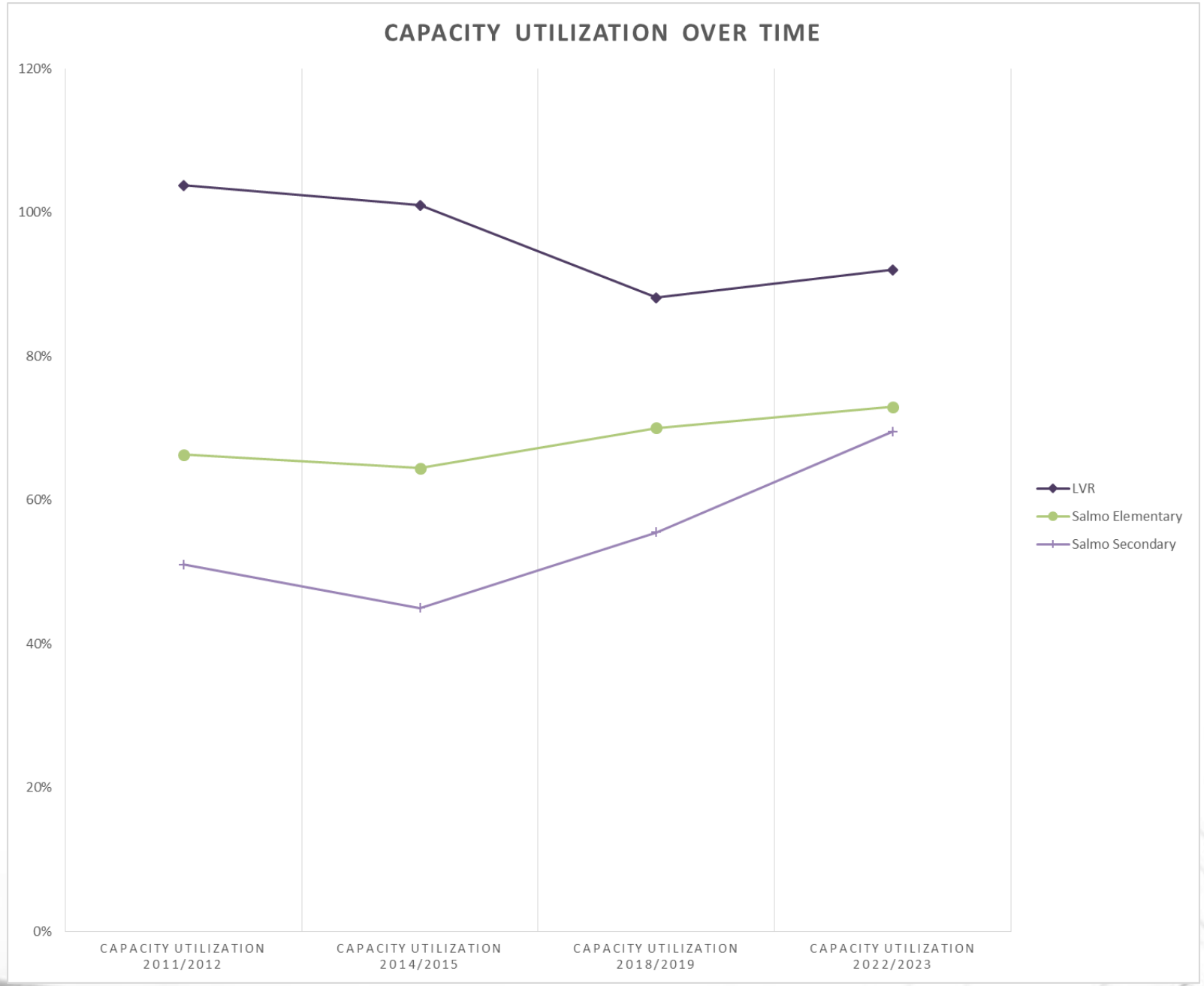
Salmo Elementary

Year	Headcount	Nominal Capacity	Capacity Utilization	Empty Seats
11/12	179	270	66%	91
12/13	171	270	63%	99
13/14	180	270	67%	90
14/15	174	270	64%	96
15/16	179	270	66%	91
16/17	183	270	68%	87
17/18	189	270	70%	81
18/19	189	270	70%	81
19/20	183	270	68%	87
20/21	193	270	71%	77
21/22	196	270	73%	74
22/23	197	270	73%	73
23/24	200	270	74%	70

Salmo Secondary

Year	Headcount	Nominal Capacity	Capacity Utilization	Empty Seats
11/12	102	200	51%	98
12/13	99	200	50%	101
13/14	98	200	49%	102
14/15	90	200	45%	110
15/16	89	200	45%	111
16/17	103	200	52%	97
17/18	109	200	55%	91
18/19	111	200	56%	89
19/20	131	200	66%	69
20/21	133	200	67%	67
21/22	137	200	69%	63
22/23	139	200	70%	61
23/24	143	200	72%	57


CAPACITY UTILIZATION OVER TIME
160%
140%
120%
100%
80%
60%
40%
20%
0%
CAPACITY UTILIZATION 2011/2012
CAPACITY UTILIZATION 2014/2015
CAPACITY UTILIZATION 2018/2019
CAPACITY UTILIZATION 2022/2023
ARES
Blewett
Brent Kennedy
Canyon
Crawford Bay
Erickson
Hume
Jewett
JVH
LVR
Mt Sentinel
PCSS
Redfish
Rosemont
Salmo Elementary
Salmo Secondary
South Nelson
Trafalgar
WE Graham
Winlaw
Yahk


CAPACITY UTILIZATION OVER TIME
120%
100%
80%
60%
40%
20%
0%
CAPACITY UTILIZATION 2011/2012
CAPACITY UTILIZATION 2014/2015
CAPACITY UTILIZATION 2018/2019
CAPACITY UTILIZATION 2022/2023
LVR
Salmo Elementary
Salmo Secondary

Summary of Unutilized Space

Summary of Capacity Utilization		
Family of Schools	**Empty Seats (22/23)**	**Underutilized (22/23)**
District	1,490	25%
Creston	431	26%
Salmo	134	29%
Kaslo/Crawford Bay	330	52%
Slocan	243	25%
Nelson	352	16%

Funding

- Capital upgrades are funded three ways:

1. Ministry of Education/Minister of Finance major capital money (scarce)
2. Annual Facilities Grant ($1.3 million/year; unable to carry forward)
3. Operating funds ($4.69 million budget 14/15)

Facility Condition

- VFA is a contractor for the Ministry of Education
  - Performs a cycle of facility audits
  - Maintains database of all assets
- VFA audited SD8 in June 2014
- Industry perspective
- Need operations crew critical eye to challenge VFA data
- Annual Facilities Grant spending is now tied to this data

Facility Condition Index

- **Facility Condition Index:** the lower the better condition your building
- FCI = $\frac{\text{Deferred Maintenance Costs (“Requirements”)}}{\text{Cost to Rebuild (“Replacement”)}}$
- Deferred Maintenance Costs = future repairs to keep asset functioning
- Replacement = cost to build “like kind”
- NOTE: MOE replacement likely would not rebuild exactly what we have now; would replace at current design build standards per the capital branch

SD08 - Facilities Condition Index (FCI) Ranking		
		FCI
Crawford Bay	CB	0%
Salmo Secondary	Salmo	0%
Maintenance - Kaslo	Kaslo	8%
Erickson	Creston	11%
Mount Sentinel	Slocan	11%
LV Rogers	Nelson	14%
WE Graham	Slocan	14%
Brent Kennedy	Slocan	15%
South Creston	Creston	17%
Adam Robertson	Creston	18%
JV Humphries	Kaslo	18%
PCSS	Creston	19%
Bus Garage - Nelson	Nelson	22%
Redfish	Nelson	23%
Maintenance - Nelson	Nelson	27%
South Nelson	Nelson	27%
Hume	Nelson	29%
Gordon Sargent	Nelson	30%
Canyon Lister	Creston	31%
Jewett	Kaslo	31%
Central	Nelson	31%
Board Office - Creston	Creston	33%
Maintenance - Creston	Creston	36%
Board Office - Nelson	Nelson	36%
Rosemont	Nelson	36%
Traflagar	Nelson	37%
Winlaw	Slocan	37%
Blewett	Nelson	38%
Al Collinson	Nelson	40%
Yahk	Creston	42%
Salmo Elementary	Salmo	56%

SD08 - Facilities Condition Index (FCI) Ranking		
		FCI
Crawford Bay	CB	0%
Salmo Secondary	Salmo	0%
Maintenance - Kaslo	Kaslo	8%
Erickson	Creston	11%
Mount Sentinel	Slocan	11%
Traflagar	Nelson	37%
Winlaw	Slocan	37%
Blewett	Nelson	38%
Al Collinson	Nelson	40%
Yahk	Creston	42%
Salmo Elementary	Salmo	56%

SD08 - Facilities Condition Index (FCI) Ranking		
		FCI
Erickson	Creston	11%
South Creston	Creston	17%
Adam Robertson	Creston	18%
PCSS	Creston	19%
Canyon Lister	Creston	31%
Board Office - Creston	Creston	33%
Maintenance - Creston	Creston	36%
Yahk	Creston	42%

SD08 - Facilities Condition Index (FCI) Ranking		
		FCI
Crawford Bay	CB/Kaslo	0%
Maintenance - Kaslo	CB/Kaslo	8%
JV Humphries	CB/Kaslo	18%
Jewett	CB/Kaslo	31%

SD08 - Facilities Condition Index (FCI) Ranking		
		FCI
LV Rogers	Nelson	14%
Bus Garage - Nelson	Nelson	22%
Redfish	Nelson	23%
Maintenance - Nelson	Nelson	27%
South Nelson	Nelson	27%
Hume	Nelson	29%
Gordon Sargent	Nelson	30%
Central	Nelson	31%
Board Office - Nelson	Nelson	36%
Rosemont	Nelson	36%
Trafalgar	Nelson	37%
Blewett	Nelson	38%
AI Collinson	Nelson	40%

SD08 - Facilities Condition Index (FCI) Ranking		
		FCI
Salmo Secondary	Salmo	0%
Salmo Elementary	Salmo	56%

SD08 - Facilities Condition Index (FCI) Ranking		
		FCI
Mount Sentinel	Slocan	11%
WE Graham	Slocan	14%
Brent Kennedy	Slocan	15%
Winlaw	Slocan	37%

Deferred Maintenance Costs

- District-wide: $52.7 million
- Annual AFG grant: $1.3
- 40.54 years worth of repairs
- Does not take into account “immediate” repairs of $12.6 million taking 10 years to address

BRITISH COLUMBIA
Ministry of Education

Requirements Crosstab Report
by Category and Priority

Category and Priority	1- Immediate	2- Short Term	3- Long Term	4- Recommended	5- Does Not Meet Current Codes / Standards	Total
Accessibility	1,102	0	0	19,132	588,410	608,644
Air and Water Quality	0	0	0	13,974	0	13,974
Appearance	0	1,672	0	0	0	1,672
Asbestos	0	0	0	8,341	0	8,341
Beyond Useful Life	12,395,695	5,545,305	32,490,553	0	0	50,431,553
Building Code	0	0	0	0	1,071,266	1,071,266
Capacity/Design	0	0	96,882	0	0	96,882
Energy	0	0	0	207,428	0	207,428
Life Safety	184,290	0	0	0	0	184,290
Maintenance	0	3,289	3,108	0	0	6,397
Modernization	0	27,370	0	51,159	0	78,529
Reliability	40,678	3,688	0	0	0	44,366
Total	12,621,765	5,581,324	32,590,543	300,034	1,659,676	52,753,342

Critical Failures

- With so many immediate needs and limited capital funding, SD8 experiences critical failures and lost instructional days due to school closures:

Site	Issue	School Year	Number of Days of Instruction Lost	Approx. Cost
Blewett Elementary	Sewer system failure	2012-2013	0	$80,000
WE Graham Elementary	Water supply failure	2013-2014	2	$10,000
WE Graham Elementary	Propane tank valve failure	2012-2013	1	$2,000
Jewett Elementary	Sewer system failure	2013-2014	1	$2,500
Jewett Elementary	Propane failure	2012-2013	2	
Hume Elementary	Activity room mold	2012-2013	0	$180,000
Yahk Elementary	Sewer system failure	2013-2014	2	$7,500
Trafalgar Middle School	Plugged storm drain #1	2012-2013	0.5	$25,000
Trafalgar Middle School	Plugged storm drain #2	2013-2014	0	$1,000
Trafalgar Middle School	Boiler coil failure	2010-2011	Partial site restriction	$3,000
Winlaw Elementary	Water supply failure	2013-2014	2.5	
				$311,000

- $50.4 million of the $52.7 million in deferred maintenance costs = systems beyond their useful life = more critical failures.

BRITISH COLUMBIA
Ministry of Education

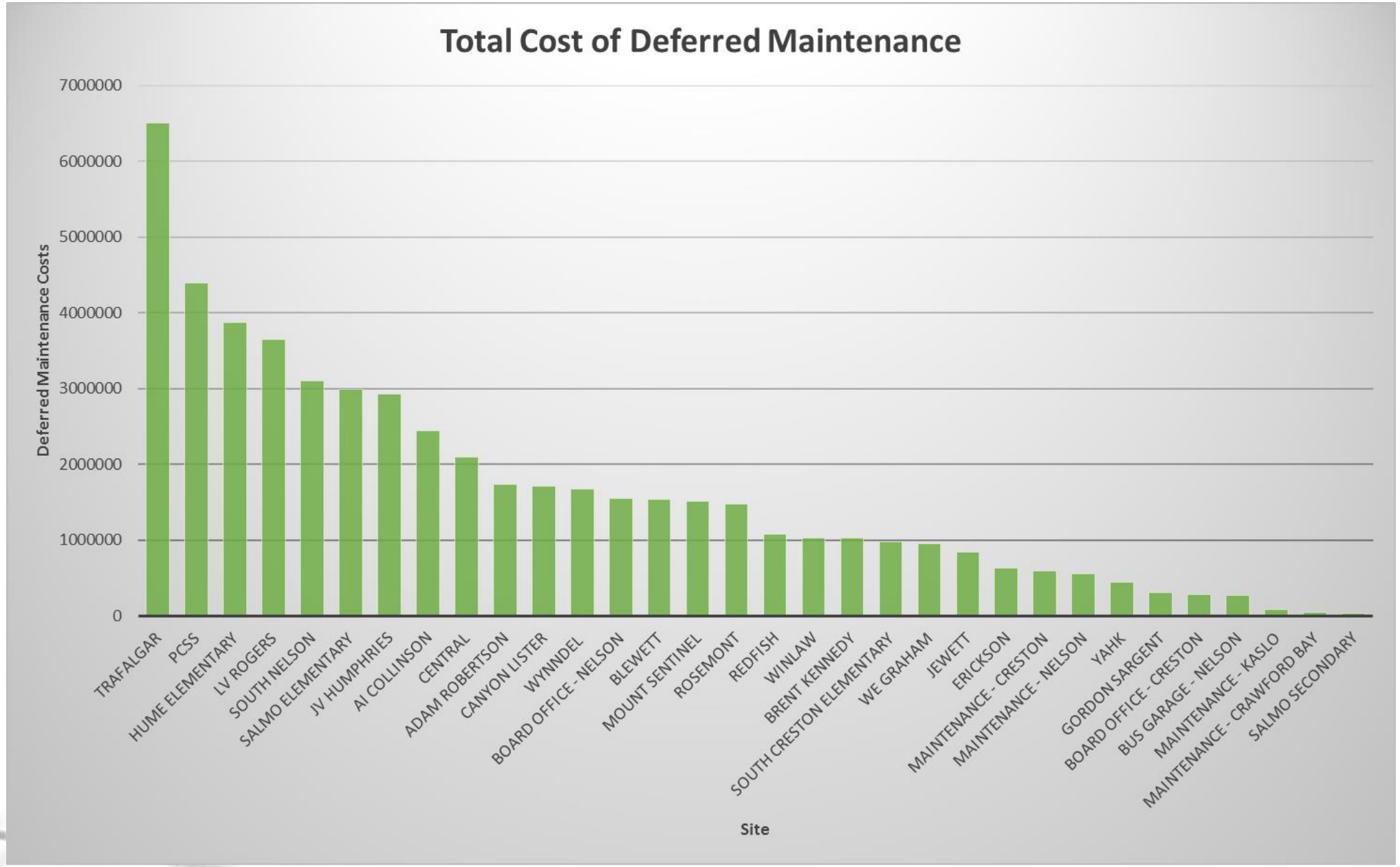
Requirements Crosstab Report
by System Group and Priority

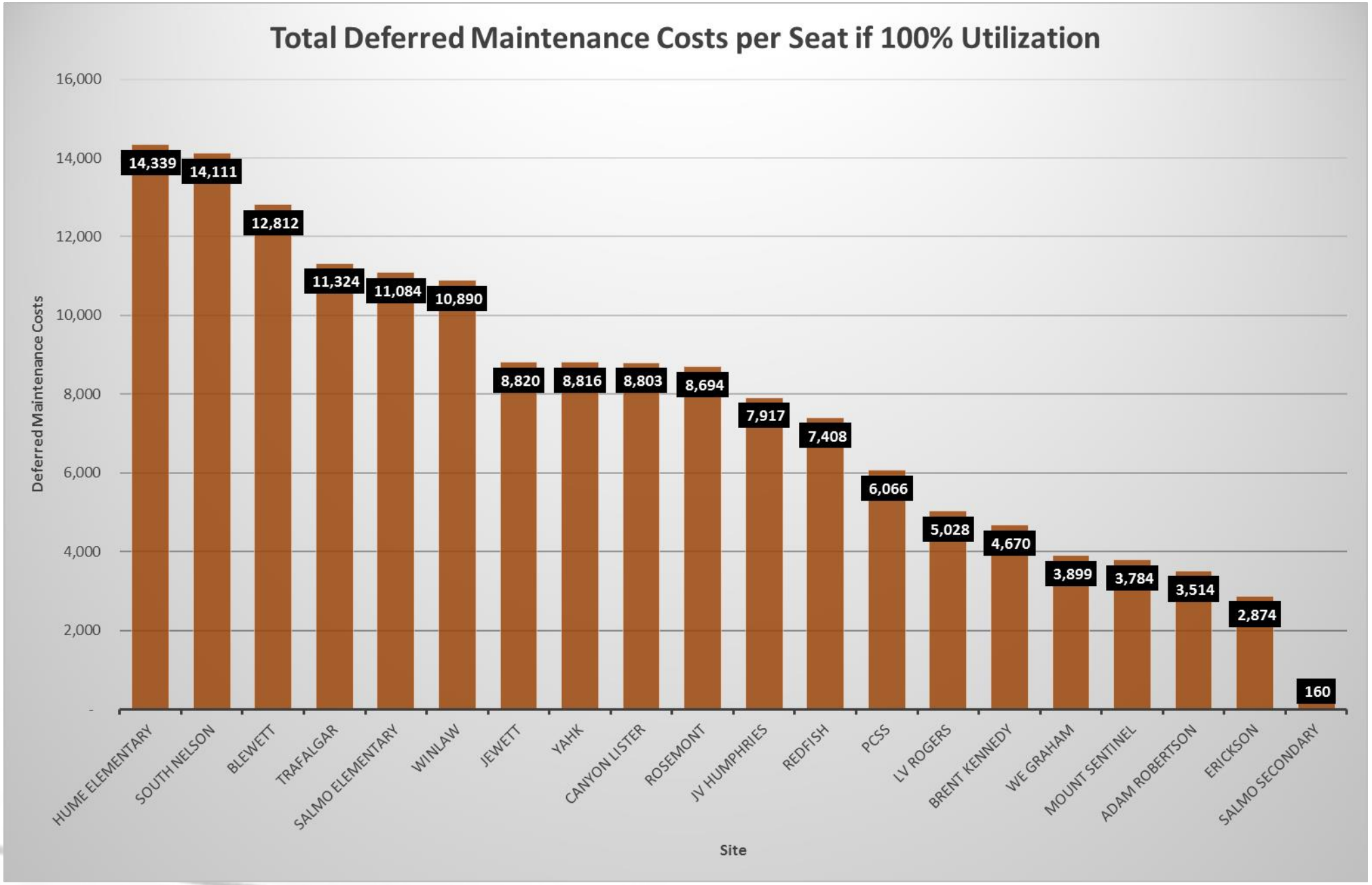
System Group and Priority	1- Immediate	2- Short Term	3- Long Term	4- Recommended	5- Does Not Meet Current Codes / Standards	Total
Electrical System	762,893	1,831,004	10,307,124	242,809	58,437	13,202,267
Equipment	0	10,758	43,722	0	0	54,480
Equipment and Furnishings	1,423,156	0	3,768,069	0	0	5,191,225
Exterior Enclosure	5,148,184	1,138,457	3,234,858	0	171,731	9,693,230
Fire Protection	0	3,665	60,894	0	374,582	439,141
HVAC System	59,351	592,937	5,400,087	11,336	62,711	6,126,422
Interior Construction and Conveyance	3,811,914	1,268,901	4,660,985	8,341	759,143	10,509,284
Plumbing System	8,443	119,305	3,211,016	18,416	2,105	3,359,285
Site	1,377,213	616,297	1,829,244	0	4,174	3,826,928
Special Construction	0	0	73,045	0	0	73,045
Structure	25,645	0	1,499	0	12,506	39,650
Not Applicable	4,966	0	0	19,132	214,287	238,385
Total	12,621,765	5,581,324	32,590,543	300,034	1,659,676	52,753,342

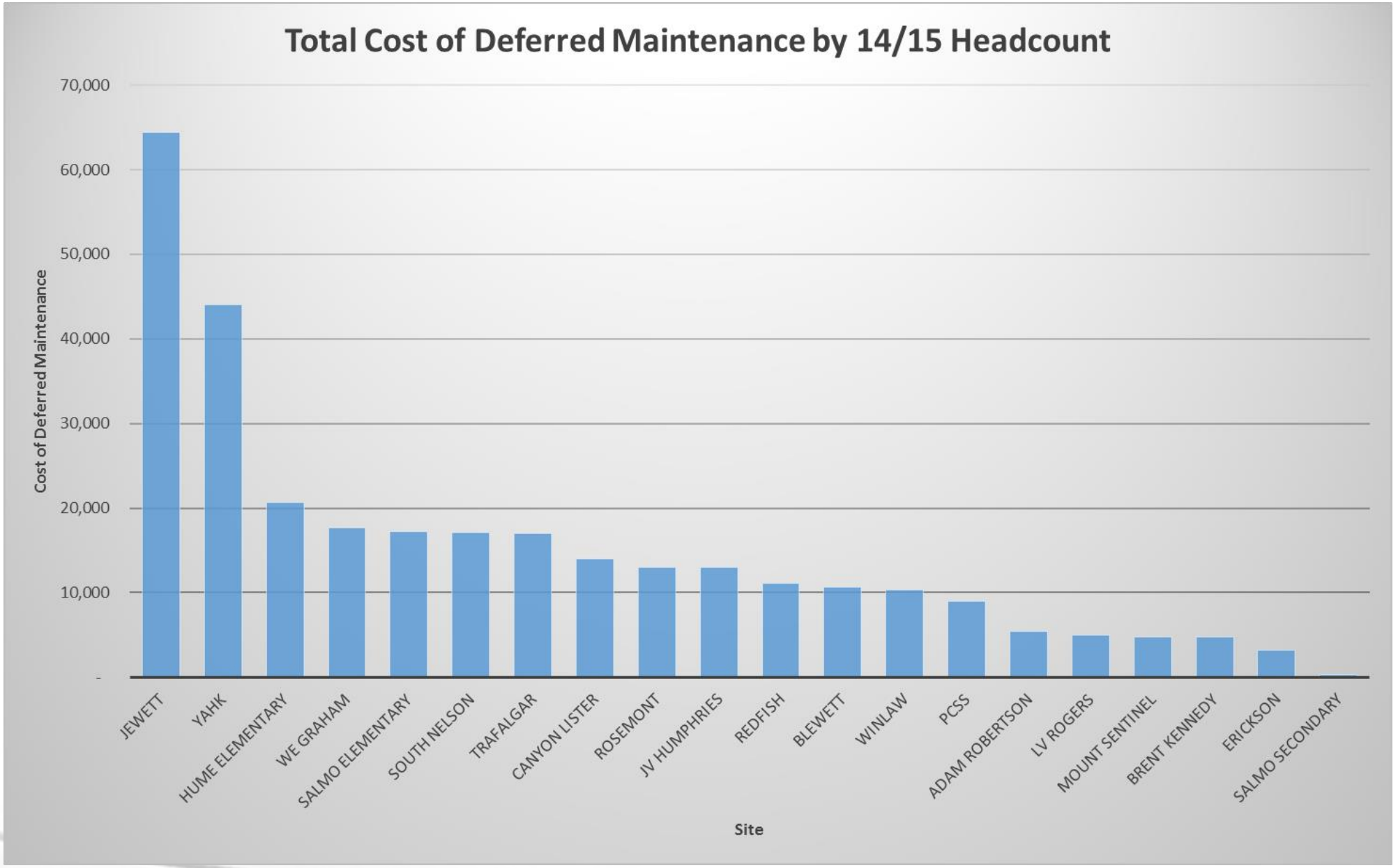
BRITISH COLUMBIA
Ministry of Education

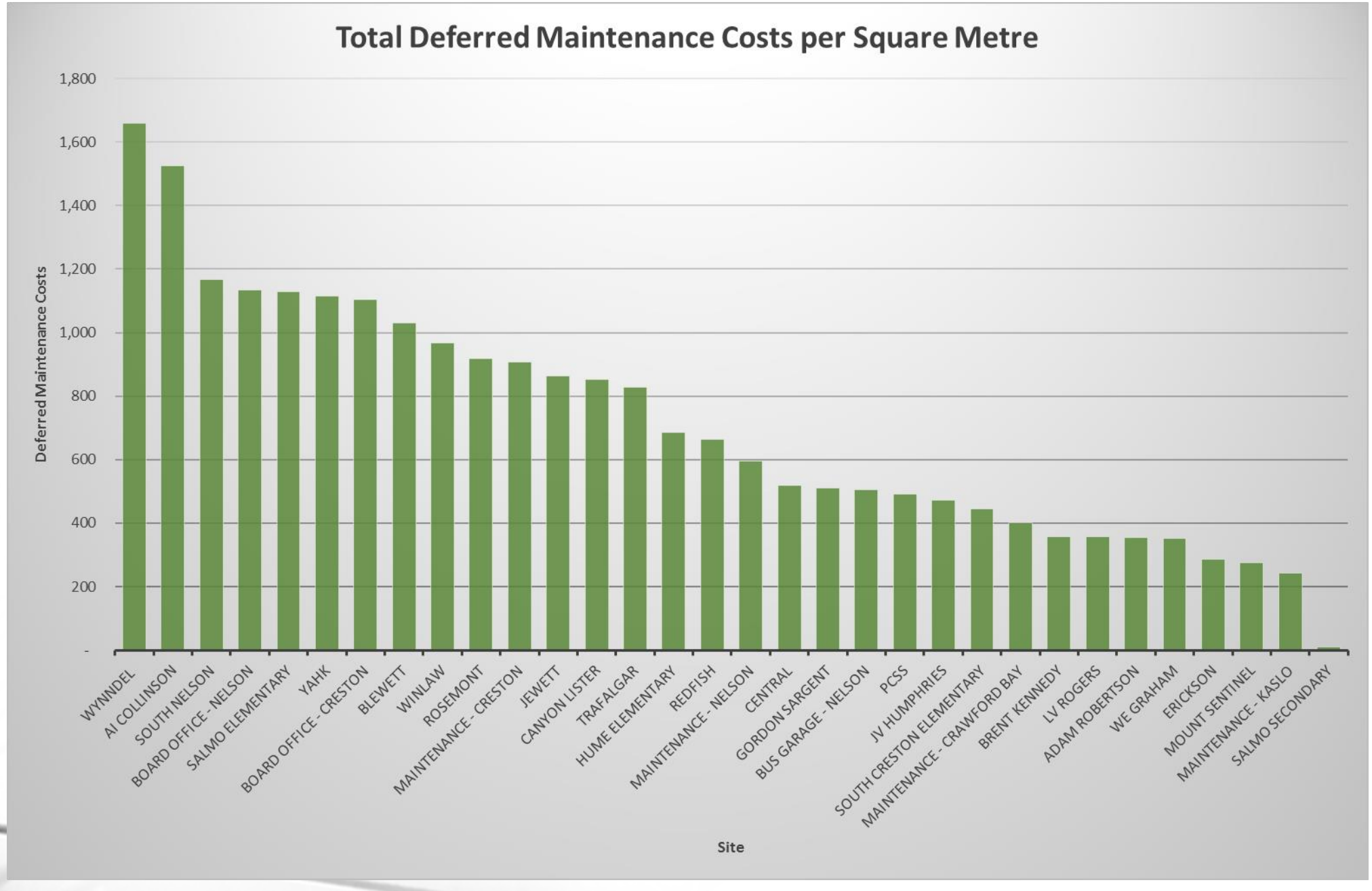
Requirements Crosstab Report
by Category and System Group

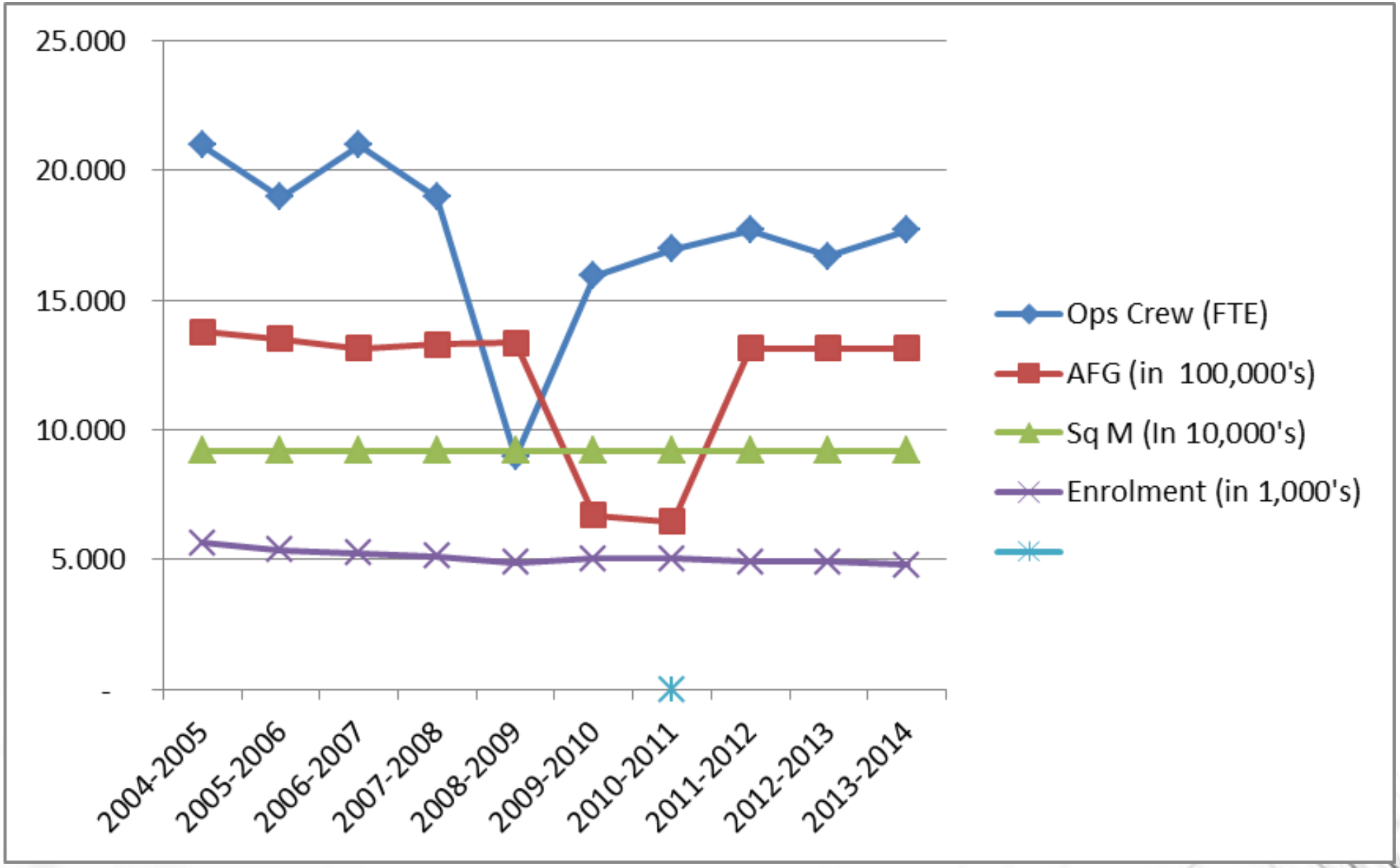
Category and System Group	Electrical System	Equipment	Equipment and Furnishings	Exterior Enclosure	Fire Protection	HVAC System	Interior Construction and Conveyance	Plumbing System	Site	Special Construction	Structure	Not Applicable	Total
Accessibility	0	0	0	159,192	0	0	308,374	0	4,174	0	6,200	130,704	608,644
Air and Water Quality	0	0	0	0	0	11,336	0	2,638	0	0	0	0	13,974
Appearance	0	0	0	0	0	0	1,672	0	0	0	0	0	1,672
Asbestos	0	0	0	0	0	0	8,341	0	0	0	0	0	8,341
Beyond Useful Life	12,762,539	54,480	5,191,225	9,380,569	64,559	6,021,242	9,703,733	3,335,475	3,819,646	73,045	25,040	0	50,431,553
Building Code	58,437	0	0	12,539	374,582	62,711	450,769	2,105	0	0	6,306	103,817	1,071,266
Capacity/ Design	0	0	0	96,882	0	0	0	0	0	0	0	0	96,882
Energy	207,428	0	0	0	0	0	0	0	0	0	0	0	207,428
Life Safety	111,112	0	0	0	0	31,133	36,077	0	0	0	2,104	3,864	184,290
Maintenance	0	0	0	0	0	0	0	3,289	3,108	0	0	0	6,397
Modernization	62,751	0	0	0	0	0	0	15,778	0	0	0	0	78,529
Reliability	0	0	0	44,048	0	0	318	0	0	0	0	0	44,366
Total	13,202,267	54,480	5,191,225	9,693,230	439,141	6,126,422	10,509,284	3,359,285	3,826,928	73,045	39,650	238,385	52,753,342


Total Cost of Deferred Maintenance
Deferred Maintenance Costs
7000000
6000000
5000000
4000000
3000000
2000000
1000000
0
TRAFALGAR
PCSS
HUME ELEMENTARY
LV ROGERS
SOUTH NELSON
SALMO ELEMENTARY
JV HUMPHRIES
AI COLLINSON
CENTRAL
ADAM ROBERTSON
CANYON LISTER
WYNNDEL
BOARD OFFICE - NELSON
BLEWETT
MOUNT SENTINEL
ROSEMONT
REDFISH
WINLAW
BRENT KENNEDY
SOUTH CRESTON ELEMENTARY
WE GRAHAM
JEWETT
ERICKSON
MAINTENANCE - CRESTON
MAINTENANCE - NELSON
YAHK
GORDON SARGENT
BOARD OFFICE - CRESTON
BUS GARAGE - NELSON
MAINTENANCE - KASLO
MAINTENANCE - CRAWFORD BAY
SALMO SECONDARY
Site


Total Deferred Maintenance Costs per Seat if 100% Utilization
Deferred Maintenance Costs
16,000
14,000
12,000
10,000
8,000
6,000
4,000
2,000
-
14,339
14,111
12,812
11,324
11,084
10,890
8,820
8,816
8,803
8,694
7,917
7,408
6,066
5,028
4,670
3,899
3,784
3,514
2,874
160
HUME ELEMENTARY
SOUTH NELSON
BLEWETT
TRAFALGAR
SALMO ELEMENTARY
WINLAW
JEWETT
YAHK
CANYON LISTER
ROSEMONT
JV HUMPHRIES
REDFISH
PCSS
LV ROGERS
BRENT KENNEDY
WE GRAHAM
MOUNT SENTINEL
ADAM ROBERTSON
ERICKSON
SALMO SECONDARY
Site

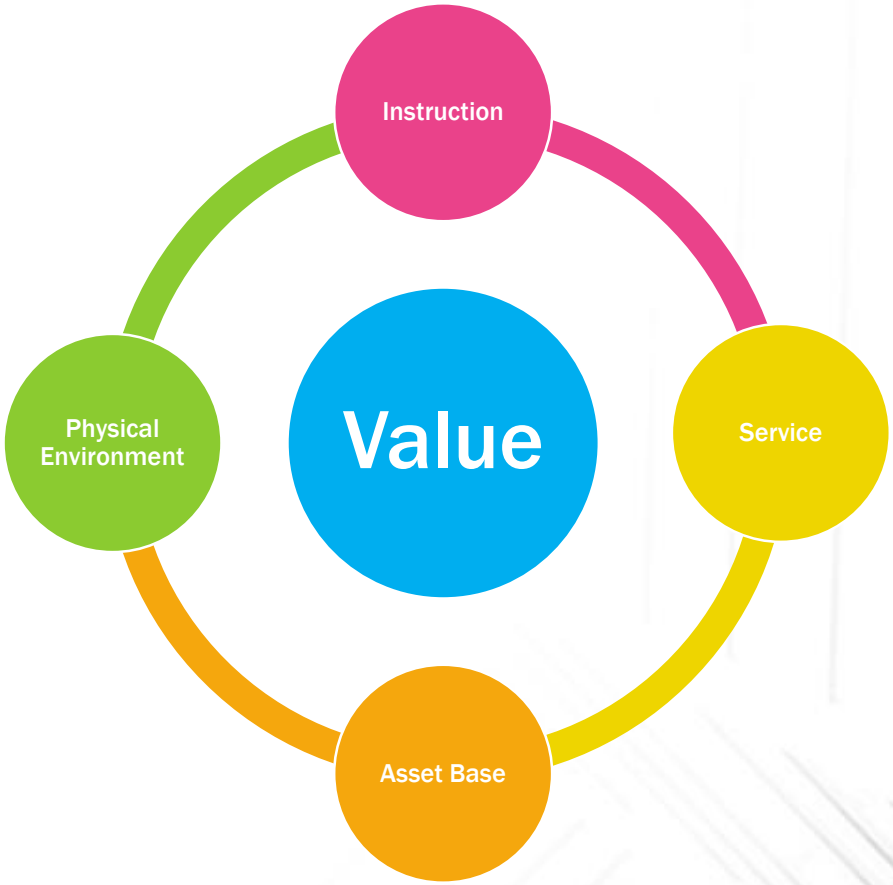

Total Cost of Deferred Maintenance by 14/15 Headcount
70,000
60,000
50,000
40,000
30,000
20,000
10,000
-
Cost of Deferred Maintenance
JEWETT
YAHK
HUME ELEMENTARY
WE GRAHAM
SALMO ELEMENTARY
SOUTH NELSON
TRAFALGAR
CANYON LISTER
ROSEMONT
JV HUMPHRIES
REDFISH
BLEWETT
WINLAW
PCSS
ADAM ROBERTSON
LV ROGERS
MOUNT SENTINEL
BRENT KENNEDY
ERICKSON
SALMO SECONDARY
Site


Total Deferred Maintenance Costs per Square Metre
Deferred Maintenance Costs
1,800
1,600
1,400
1,200
1,000
800
600
400
200
-
WYNNDEL
AI COLLINSON
SOUTH NELSON
BOARD OFFICE - NELSON
SALMO ELEMENTARY
YAHK
BOARD OFFICE - CRESTON
BLEWETT
WINLAW
ROSEMONT
MAINTENANCE - CRESTON
JEWETT
CANYON LISTER
TRAFALGAR
HUME ELEMENTARY
REDFISH
MAINTENANCE - NELSON
CENTRAL
GORDON SARGENT
BUS GARAGE - NELSON
PCSS
JV HUMPHRIES
SOUTH CRESTON ELEMENTARY
MAINTENANCE - CRAWFORD BAY
BRENT KENNEDY
LV ROGERS
ADAM ROBERTSON
WE GRAHAM
ERICKSON
MOUNT SENTINEL
MAINTENANCE - KASLO
SALMO SECONDARY
Site


25.000
20.000
15.000
10.000
5.000
-
2004-2005
2005-2006
2006-2007
2007-2008
2008-2009
2009-2010
2010-2011
2011-2012
2012-2013
2013-2014
Ops Crew (FTE)
AFG (in 100,000's)
Sq M (In 10,000's)
Enrolment (in 1,000's)

Adding Value with Facilities Planning

1. Human resources
2. Direct service to students
3. Investment in asset base
4. Improve physical learning environment



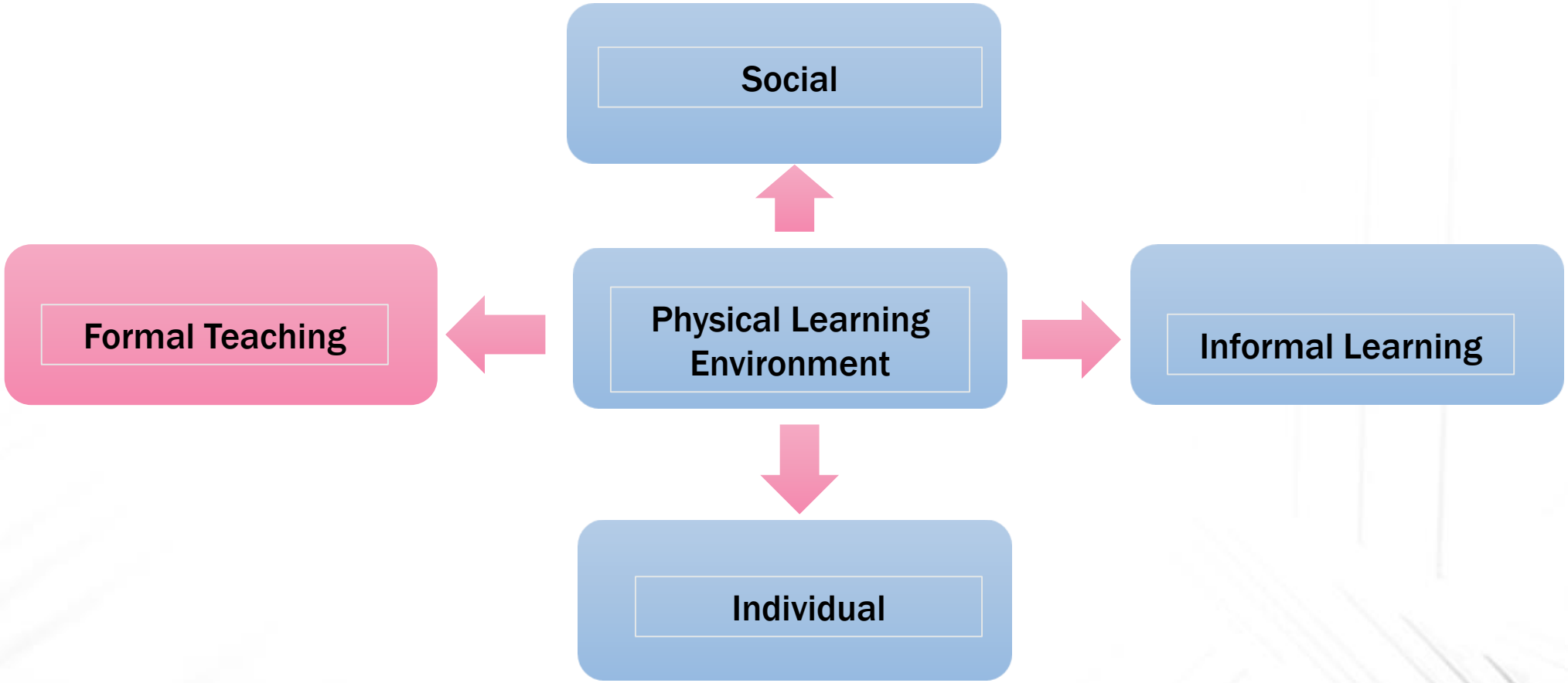
School Facilities that Support Operations

- Flooring – no carpet; concrete floors/terrazzo
- Envelope – concrete block, metal cladding, insulated roll shutters
- Mechanical – Large with ease of access, heated slab, classroom ventilators and air handlers to augment, high efficiency boilers, geothermal, remote access
- Custodial – built in vacuum, drop lighting, standard water temperature, classroom regulated heat, sufficient size closets with floor sinks, washable paint, concrete washroom surfaces
- Technology – dedicated communication room, multiple drops in classrooms, cooling in server rooms, fibre links, cable trays, hardwired clocks, audio systems in all rooms
- Electrical – large room with ease of access and cooling, generator backup, cable trays and conduit, redundancy, LED & T5 lighting (dimmable), occupancy sensors, remote access
- Roof – flat roof, interior access, limited skylights, limited roof penetrations

School Facilities that Support Learning

Ideas for today and tomorrow

Organizing for Learning



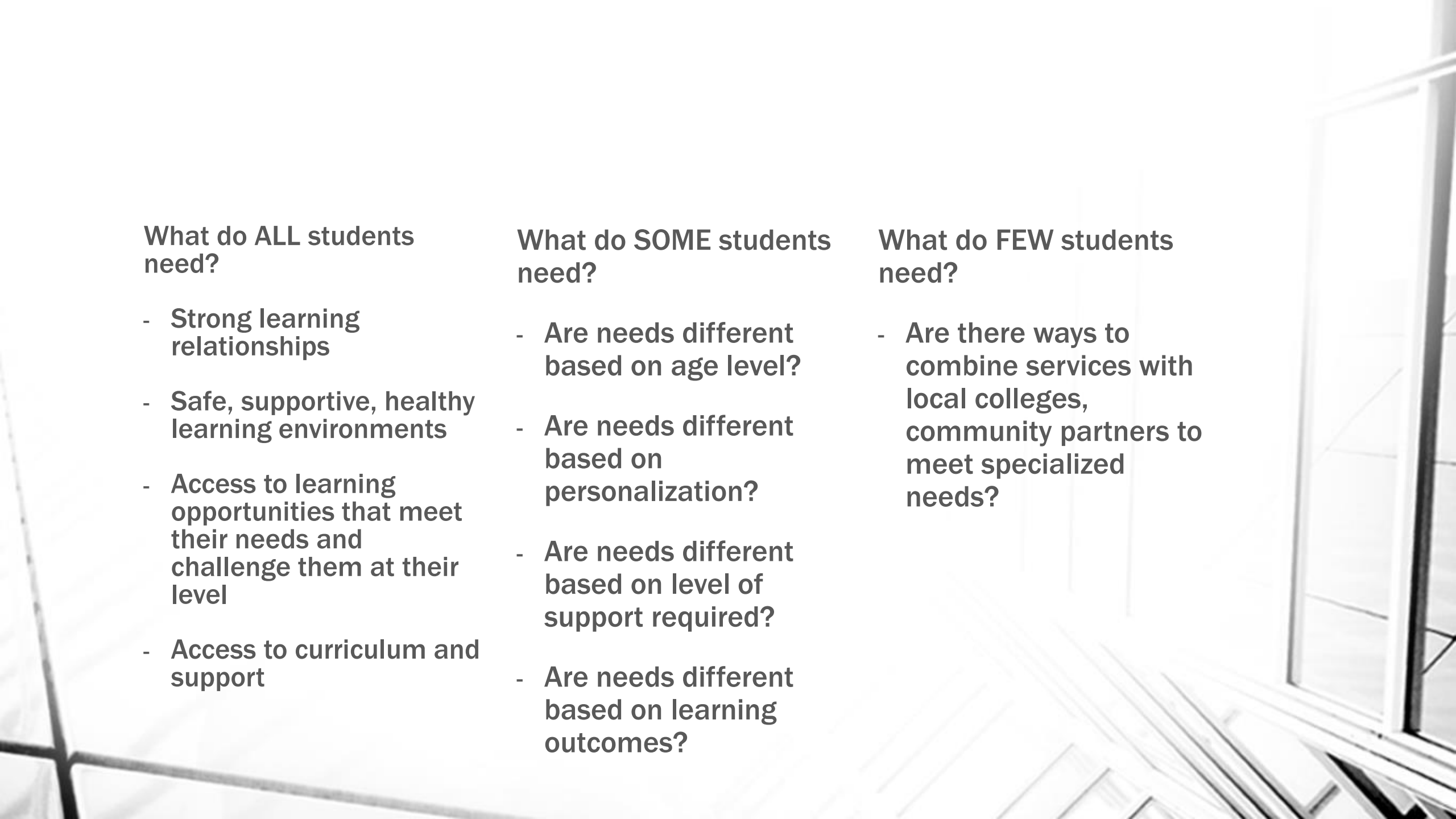
The Future of the physical Learning Environment: School Facilities that Support the User (2011)

Dynamic Learning Spaces

- Flexible furniture solutions
- Context-driven
- The notion of “classes” and “class size” will morph into organization for learning; learning spaces need to be flexible in order to accommodate this shift
- Seamless access to technology
- Emphasis on many ways to organize – individual, in groups, working spaces, collaboration spaces
- Break-out spaces to provide “retreat” time for individuals or small groups
- Dispersed learning environments within the school building, and throughout the community
- Mobility options for students and staff (online learning environments, access to business operations and functions)
- Mobility options for staff and students allow us to think ‘outside of school walls’ – creating options for virtual and physical attendance
- Do all programs need classroom space? As we recognize community partnerships as critical to learning, how does this impact our space design?

Community Partnerships – Shared Spaces

- Facilities need to reflect the local context; districts need to be prepared to understand that a facility that serves one community well, may not necessarily be replicated with success in other communities
- Community Service Organizations who work closely with schools may be co-located in school buildings
- Public libraries and school libraries often duplicate services; can they co-locate and service community and schools?
- Can more than one program – with different pedagogical perspectives, be located in one facility?



What do ALL students need?

- Strong learning relationships
- Safe, supportive, healthy learning environments
- Access to learning opportunities that meet their needs and challenge them at their level
- Access to curriculum and support

What do SOME students need?

- Are needs different based on age level?
- Are needs different based on personalization?
- Are needs different based on level of support required?
- Are needs different based on learning outcomes?

What do FEW students need?

- Are there ways to combine services with local colleges, community partners to meet specialized needs?

Guiding Principles in Action

Research proven approaches

Collaborative

Collaborative inquiry
Communities of practice
Collaborative planning protocols
Collaboration hubs

Sustained

Institutes/ series/courses
Coaches
Demonstration/ modeling
Mentors

Connected

Moderated Networks
Learning showcases, fairs, rounds
Cross cluster sharing
Social media

Personalized

Choice
Access
Resources
Goals

Meeting the Needs of Students

Models
- Inquiry
- Problem based
- Experiential
- Simulations
- …

Design Skills
- Universal design
- Scaffolding
- **Gradual release of responsibility**
- **…**

Teaching strategies
- Cooperative learning
- Graphic organizers
- Reciprocal teaching
- Thinking skills
- ….

Assessment
- Formative
- Summative
- …

Models
- Co design by learning partners
- Blended learning
- On line learning
- …

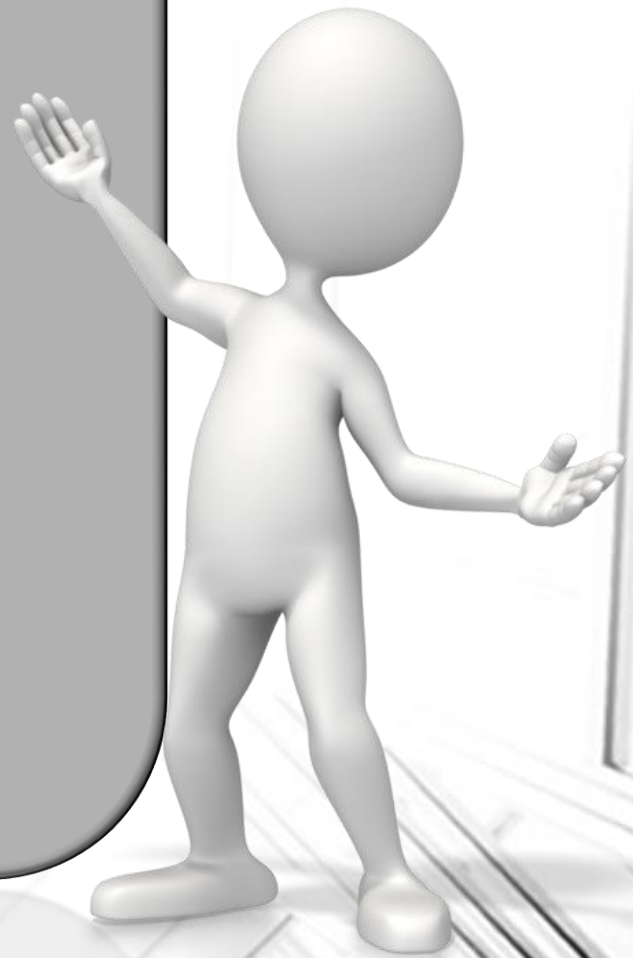
Strategies
- Learning partnerships
- collaboration tools
- Threaded discussions
- Blogs, wikis
- Apps
- Gaming
- …

Assessment
- Feedback analytics
- Self assessment
- Peer assessment
- …

What's happening in your schools?

The Nature of Learning

- The LEARNER at the center
- Learning is SOCIAL
- EMOTION plays a Key Role in Learning
- INDIVIDUAL DIFFERENCES matter in Learning
- ALL Learners need CHALLENGE
- Learners need CLARITY and MEANINGFUL FEEDBACK
- Learners need to see CONNECTIONS



SD8 Kootenay Lake: Refresh, Repurpose, Reinvent?

Susanne Maguire
Teacher
School District 8
November, 2014

“Alongside quality teaching and purposeful leadership, decent school environments inspire pupils to give their best and properly enable our teachers to teach.”

T. Goddard, Director, British Council for School Environment

Some images and information to inspire...

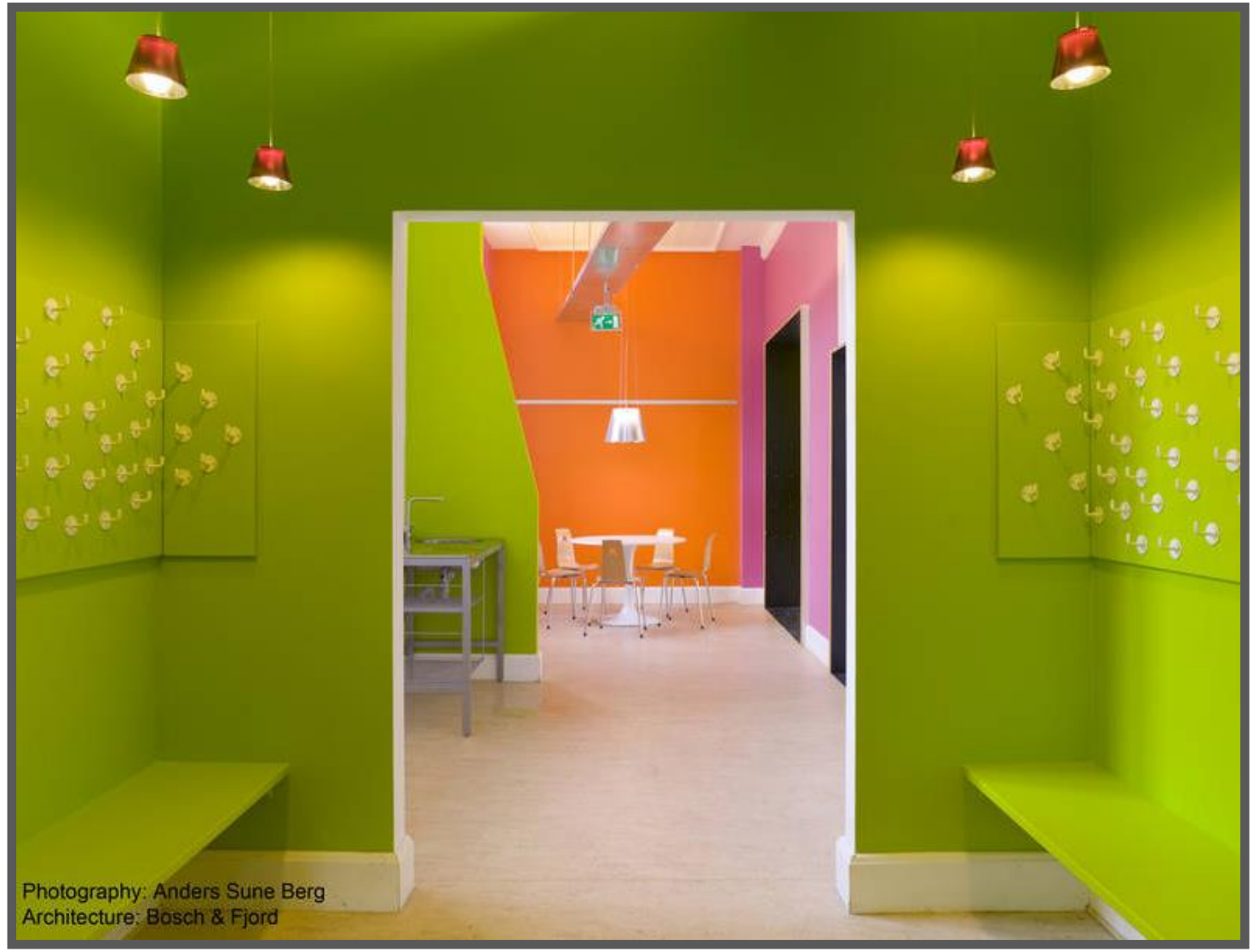
Trends Affecting School Environment

Of the many changes underway in education, **two trends** in particular are revolutionizing the design of the learning environment:

*The shift from the teacher as a "sole practitioner" to interactive team teaching

*The recognition that students have a variety of learning styles requiring varied and flexible learning situations.

Each of these trends poses significant challenges to the design of the learning environment—and in turn opens up broad opportunities for innovation.



Photography: Anders Sune Berg
Architecture: Bosch & Fjord

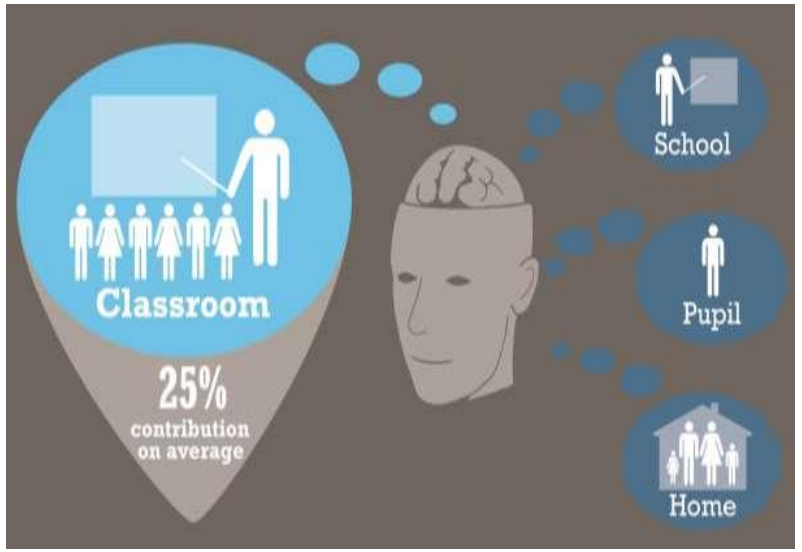

Photography: Anders Sune Berg
Architecture: Bosch & Fjord

Environmental Impacts on Academic Success

Research by University of Salford, England, 2012

Classroom environment found to have a 25% impact on student performance

- 6 out of 10 parameters had a significant impact. They are:
  - Light – 12%
  - Choice – 10%
  - Complexity – 17%
  - Colour 18%
  - Flexibility – 17%
  - Connection – 26%



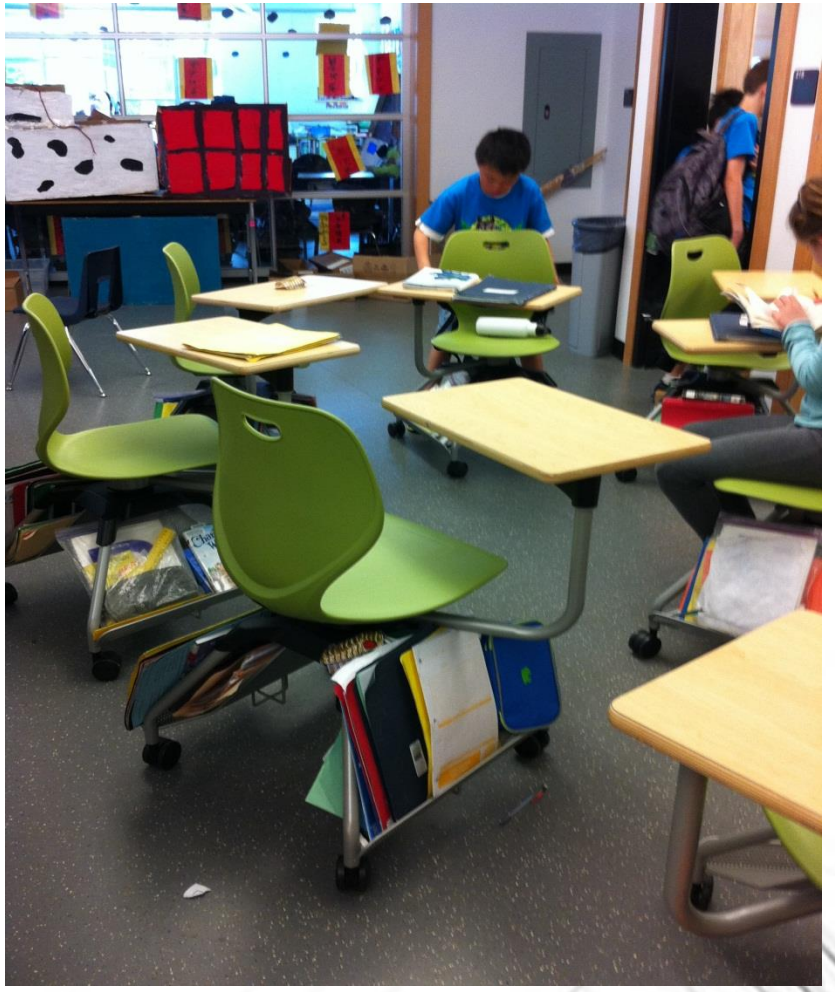
The fundamental building block of almost every single school in this country is the classroom.

Who seriously believes that locking 25 students in a small room with one adult for several hours each day is the best way for them to be “educated”?

In the 21st century, education is about project-based learning, connections with peers around the world, service learning, independent research, design and creativity, and, more than anything else, critical thinking and challenges to old assumptions.


Photography: Re
Architecture: Re-

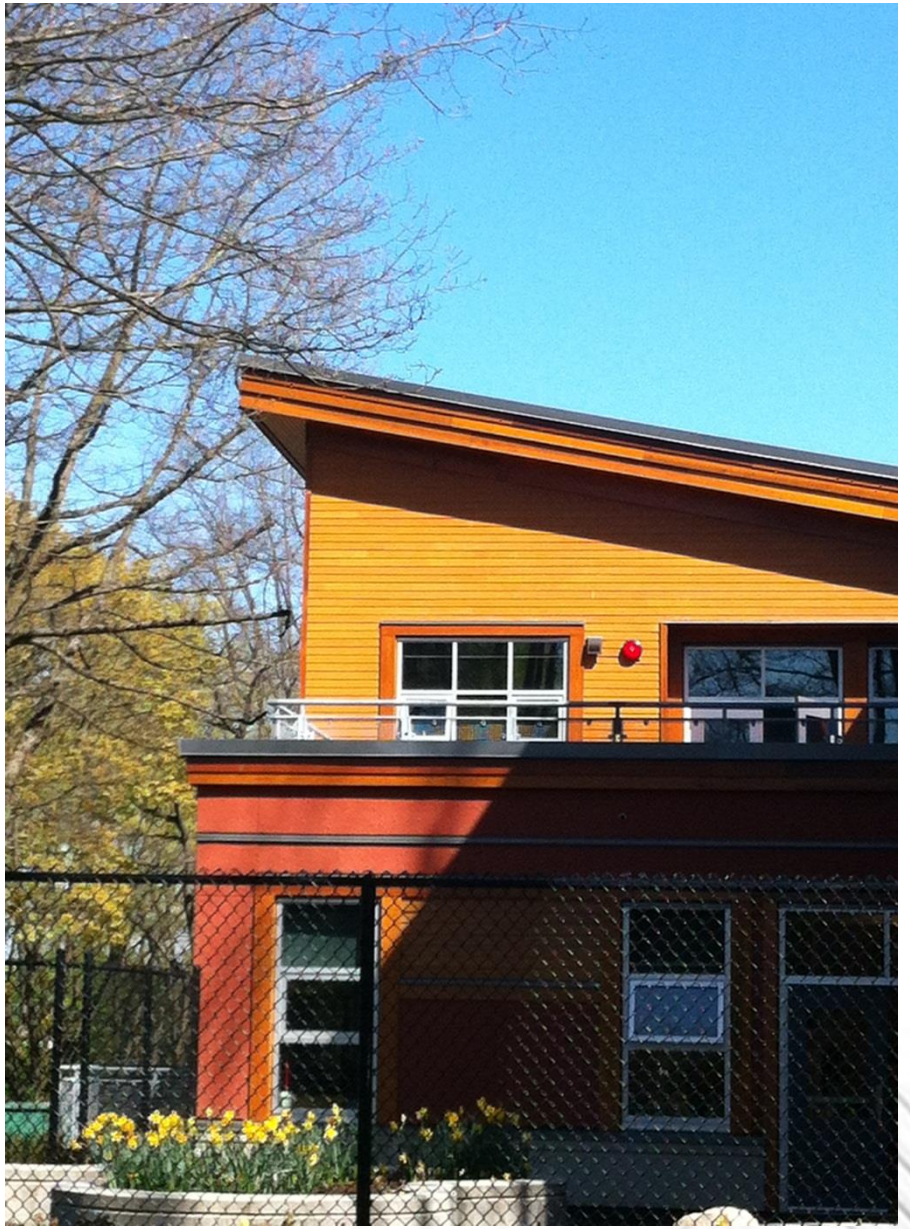

...structures will be “learning communities” characterized by adaptable spaces, small learning groups, new technologies, and environments conducive to both contemplation and interaction.



10 Things in School That Should Be Obsolete

1. Computer Labs
2. Learning in prescribed places
3. Teacher-centred classrooms
4. Isolated classrooms
5. Department organization
6. School Corridors
7. Traditional school libraries
8. Dark, indoor gyms
9. Institutional food service
10. Large restrooms

http://blogs.kqed.org/mindshift/2012/07/10-things-in-school-that-should-be-obsolete/



Don’t Just Rebuild Schools Reinvent Them

Create personalized learning communities

Make technology ubiquitous

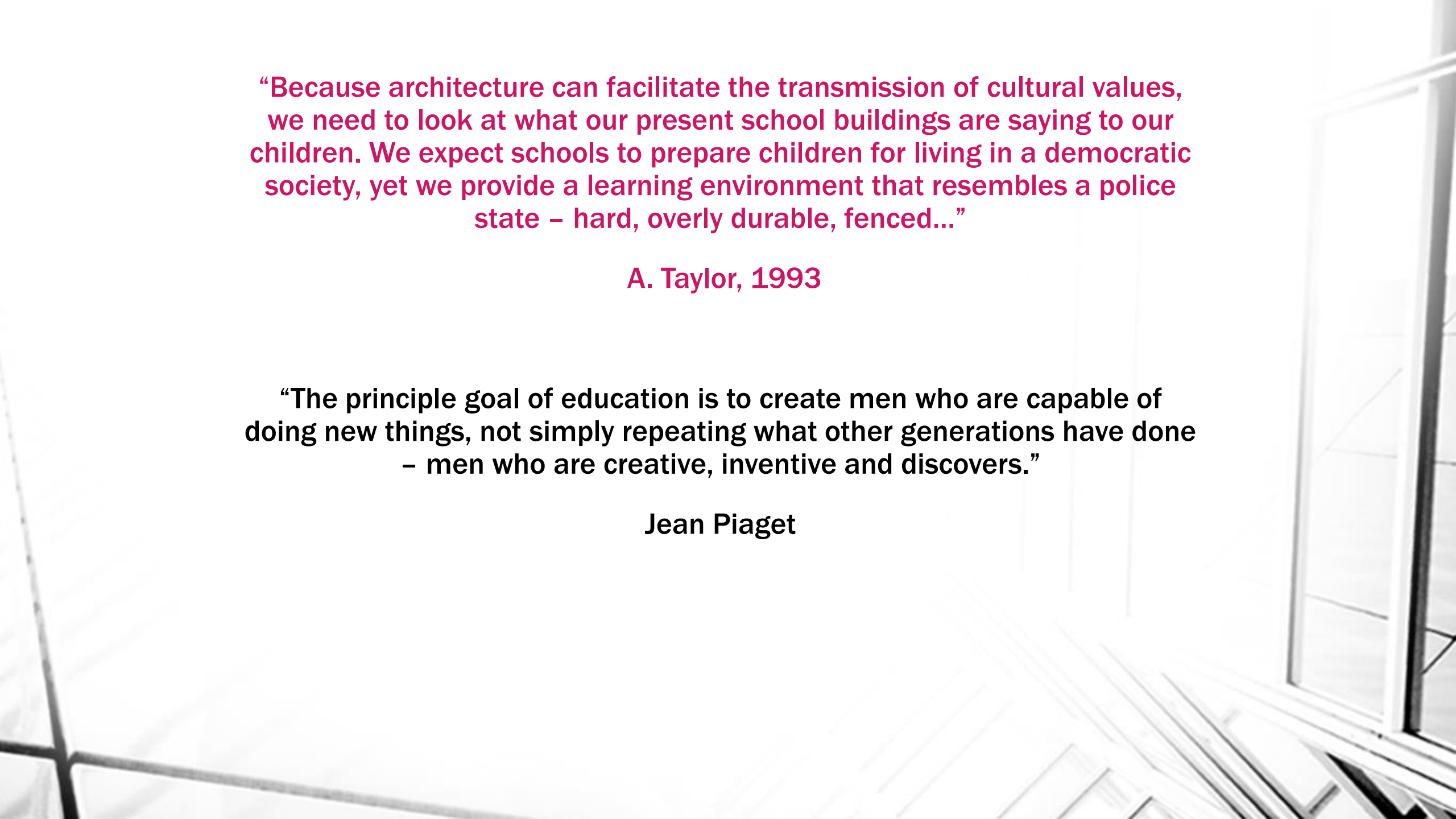
Connect with the outdoors for health, fitness, and improved academics

Focus on student comfort.

Treat teachers like professionals.

Engage parents and the community.

http://www.fieldingnair.com/Press/Education_Week_



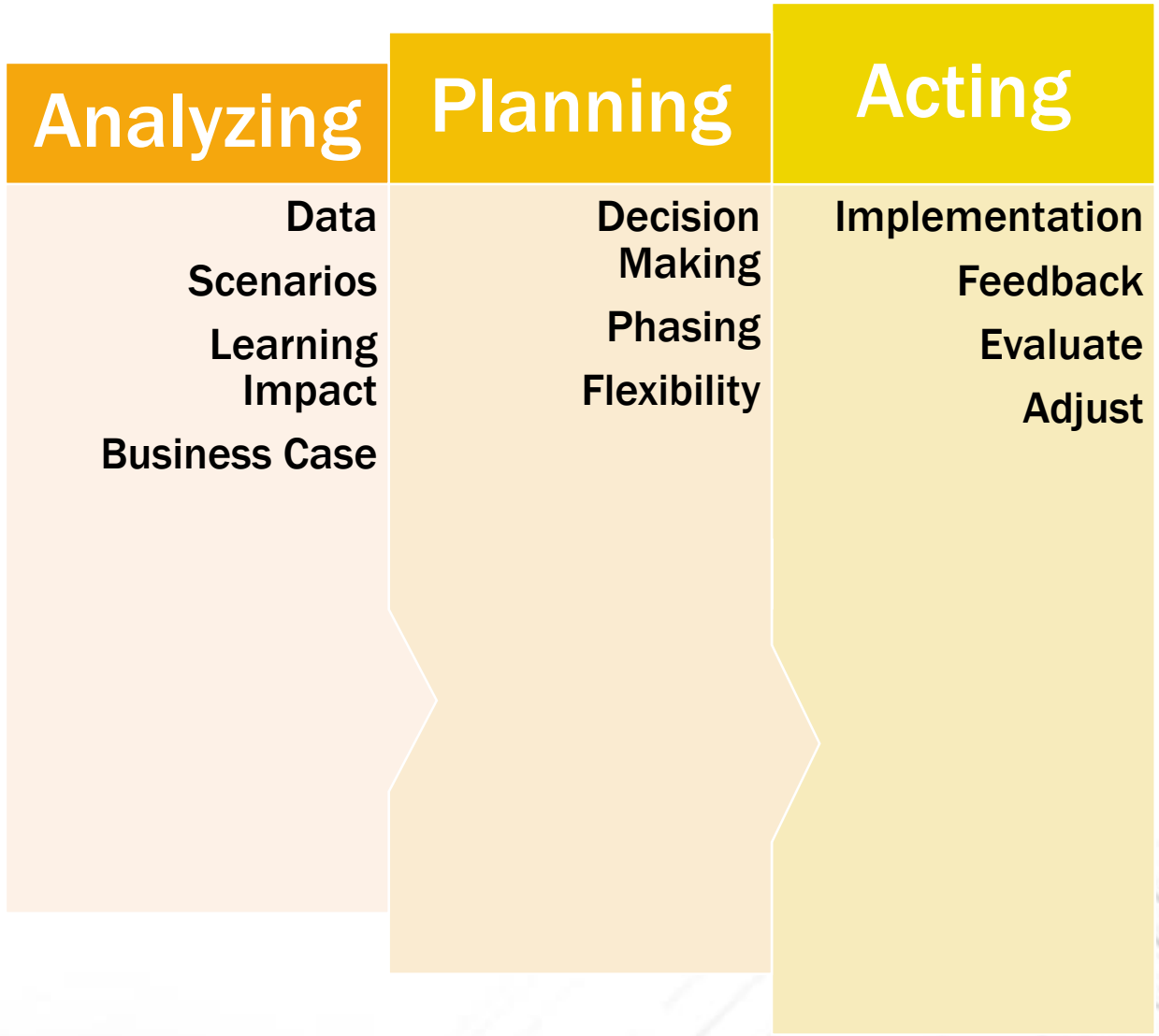
"Because architecture can facilitate the transmission of cultural values, we need to look at what our present school buildings are saying to our children. We expect schools to prepare children for living in a democratic society, yet we provide a learning environment that resembles a police state – hard, overly durable, fenced..."

A. Taylor, 1993

"The principle goal of education is to create men who are capable of doing new things, not simply repeating what other generations have done – men who are creative, inventive and discovers."

Jean Piaget

Key Stages


Analyzing
Planning
Acting
Data
Scenarios
Learning Impact
Business Case
Decision Making
Phasing
Flexibility
Implementation
Feedback
Evaluate
Adjust

Scenarios

- Otherwise knows as options, ideas, variations
- Challenges status quo to add value to the system
- We need you to think about what options the Board should consider

Scenarios

Re-Configuration

- Addresses areas of growth pressure (Winlaw/Blewett)
- May not involve closure
- May better meet learner needs
- If no closure, may or may not save money to add value to student learning

Closure – School or Space

- Involves closure of a building or space within a building
- Saves money (staffing, utilities, deferred maintenance costs) to add value to learning environment and direct service to students
- Unloads future liability by unloading capital costs

Scorecard

- Way by which to measure one scenario against another
- Business case approach, not merely cost driven
  - Long term view
  - Linked to student expectations and goals
  - Optimizes asset use
  - Organizational performance

SD8 Facilities Plan

Evaluation Criteria

Weighting: 50% Board, 25% PVP, 25% Senior Leadership - 2014 09 08

Group	Individual Criteria	Reference	Weight
Economic	1. Minimize total net capital costs over planning horizon	Basic	**9%**
22%	2. Minimize total initial capital expenditure	Basic	**5%**
	3. Minimized total operational cost over planning horizon	Basic	**9%**
Educational	4. Maximize the range of opportunities	Principle	**9%**
40%	5. Best meet the developmental needs of each age group	Principle	**10%**
	6. Minimize the distance to school for elementary students	Principle	**7%**
	7. Provide schools within preferred capacity ranges	Principle	**4%**
	8. Minimize the number of transitions between schools	Principle	**5%**
	9. Promote a unified community	Principle	**5%**
Operational	10. Improve the safety and quality of educational facilities	Basic	**11%**
19%	11. Maximize the sustainability of school facilities	Principle	**8%**
Strategic	12. Maximize the potential to respond to future change	Principle	**6%**
19%	13. Maximize potential partnership opportunities	Principle	**5%**
	14. Minimize implementation risks	Basic	**3%**
	15. Minimize disruption due to construction projects	Basic	**2%**
	16. Maximize the potential for broad community acceptance	Basic	**3%**

Other Considerations

- Strong starts
- Tenants
- Catchment
- Transfer policy
- Transportation
- Disposal of property
- Funding line items like small community supplements
- Existing partnerships
- Distributed learning in South Creston and Central Elementary Schools

Next Steps

- Give us feedback on the data – is there more you need to know?
- Give us your ideas for scenarios by January 5, 2015
- How to submit?
  - Email facilities@sd8.bc.ca
  - Fax 250-352-6686
  - Mail 570 Johnstone Road, Nelson BC, V1L 6J2

Thank you!