

P.O. Box 1749 Halifax, Nova Scotia B3J 3A5 Canada

Item No. 3 (ii)
Committee of the Whole
March 11, 2015

TO: Mayor Savage and Members of Halifax Regional Council

Original signed by

SUBMITTED BY:

Richard Butts, Chief Administrative Officer

Original Signed by

Mike Labrecque, Deputy Chief Administrative Officer

DATE: February 23, 2015

SUBJECT: Permit Data Exchange Project

ORIGIN

A proposal from the Integrated Property Services Council (IPSC). The IPSC is the successor to the Property Innovation Council that has sponsored the Single Address and eDelivery initiatives.

LEGISLATIVE AUTHORITY

Charter Section 74 (1) The Municipality may agree with one or more municipalities, villages, service commissions, the Government of the Province or of Canada or a department or agency of either of them or a band council pursuant to the Indian Act (Canada) to provide or administer municipal or village services

RECOMMENDATION

It is recommended that Halifax Regional Council

Approve the participation of Halifax in the shared Data Permit Exchange project at a cost of \$439,011 net of HST in fiscal 2015/16.

BACKGROUND

Through the Property Innovation Council, two applications have been created for the common use of municipalities and the PVSC. One is an address service, enabling a single source for address changes and the other is eDelivery with Canada Post. These initiatives have built a core of infrastructure that should be further leveraged. The PVSC, through their Technology Advancement Fund, can provide seed money for these initiatives, recovering their cost from participating municipalities. The Permit Data Exchange is the next application to be considered.

DISCUSSION

The vision for this project is to create a shared data repository where municipalities and PVSC can share current data relating to building permits, inspections and other information for a property. This will allow timelier processing, saving travel costs for the PVSC and having the value of building permits recognized on the roll sooner.

The qualitative benefits include:

- Administrative efficiencies from automated interfaces (reduced or eliminate need for double data entry and efforts associated with tracking sheets/reconciliation of permit data between municipalities and the PVSC). As the PVSC does full cost recovery from municipalities, HRM will benefit from these as well.
- Access to a high quality and current data repository for multiple departments and agencies (e.g. Stats Canada, CMHC, CRA)
- Reduction in # appeals and adjustments due to improved "state of construction"
- Facilitates progress towards legislative change for more timely assessment updates on the roll
- Improved efficiency for PVSC relating to commercial accounts

The quantitative benefits include:

Decreased costs for PVSC

Increased efficiency for PVSC field visit process (travel costs, # visits). PVSC staff report that on average 20-25% of field visits have to be repeated due to no or limited progress on the property.

Potential increase in revenue for Municipalities

Increased accuracy (% completion) of in-progress development on the roll would lead to increased tax revenue for municipalities

The cost of the project is estimated at 1.045,264. HRM share will be 42%. HRM will see 64% of the benefits from the project, and has 25% of the permits. 42% is a blend of these two numbers. The PVSC will cover 50% of the cost, and CBRM 8%. The payback for the total project is 3-5 years. For HRM, we would expect an increase of revenue of 330,000 annually for our onetime investment of 439,011.

With this infrastructure in place, there will be opportunities to leverage each others inspection activity, bringing further benefit.

FINANCIAL IMPLICATIONS

Approval to participate in the shared Data Permit Exchange project will require an increase in the proposed Capital Budget of \$439,011 (plus applicable taxes) for 2015/16. HRM will begin to see increased revenues starting in 2016/17. There are no expenditure impacts to the annual Operating Budget.

COMMUNITY ENGAGEMENT

None

ENVIRONMENTAL IMPLICATIONS

None

ALTERNATIVES

None

ATTACHMENTS

Attachment One – Permit Data Exchange (PDX) Business Case and Recommendation February 19, 2015

A copy of this report can be obtained online at http://www.halifax.ca/council/agendasc/cagenda.php then choose the appropriate meeting date, or by contacting the Office of the Municipal Clerk at 902.490.4210, or Fax 902.490.4208.

Report Prepared by: Greg Keefe, Director of Finance & ICT/CFO, 902.490.6308

Original Signed

Report and Financial

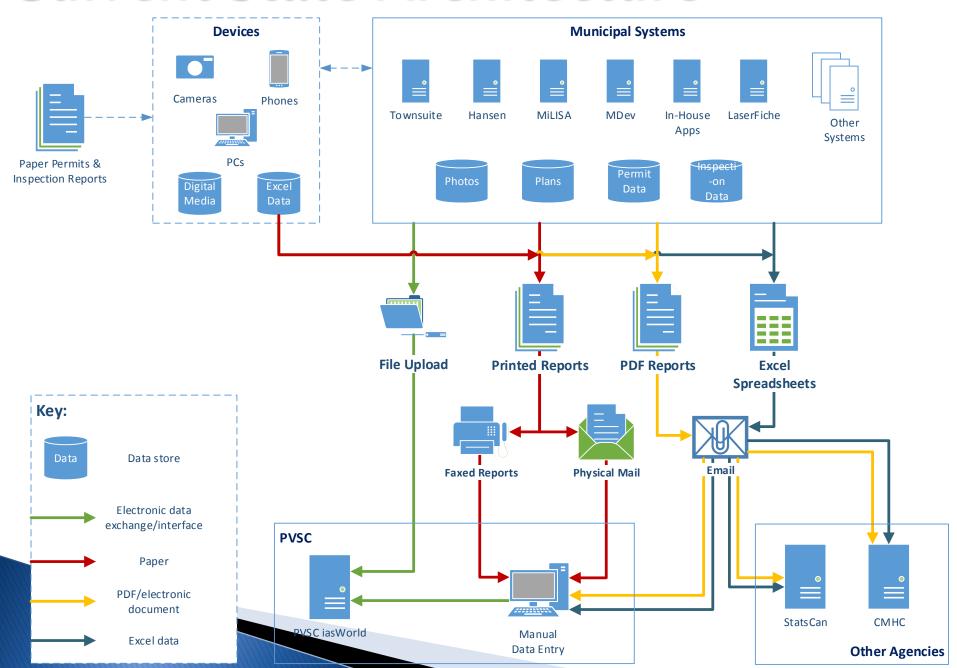
Approval by: Greg Keefe, Director of Finance & ICT/CFO, 902.490.6308

Permit Data Exchange (PDX) Business Case and Recommendation February 19, 2015

Topics

- Current State and Solution Vision Review
- "As-Is" Costing Municipalities and PVSC
- Benefits
 - Qualitative
 - Quantitative
- "To-Be" Costing
 - Project Cost (incl. vendor interface)
 - Operating Cost
- Cost/Benefit Assessment
- Investment Recovery

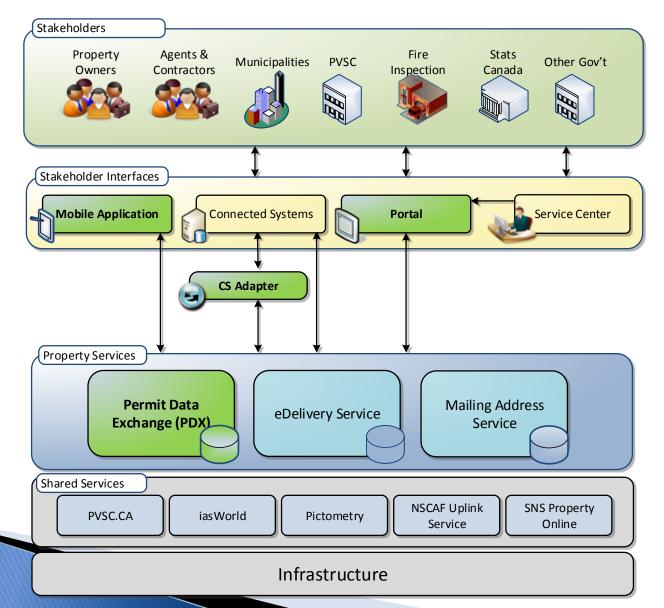
Current State Architecture



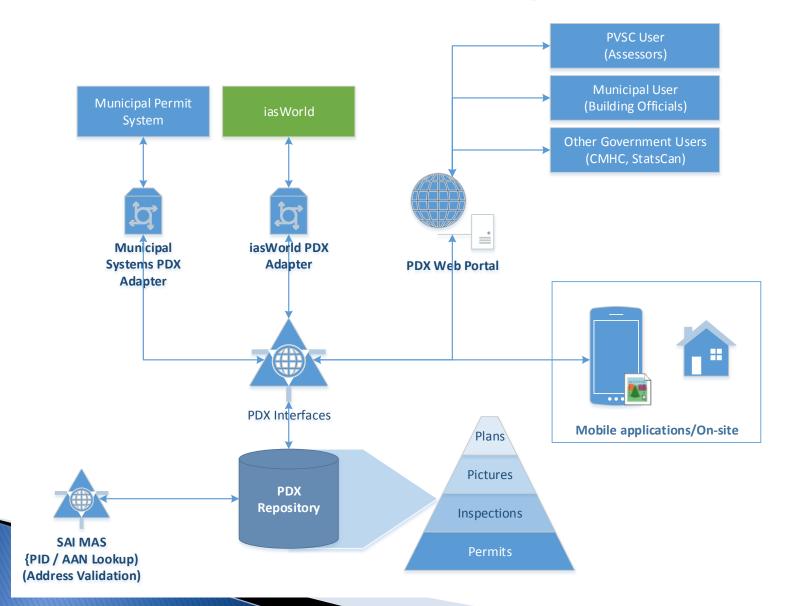
To-Be Process Vision - PDX Repository

A shared data repository where municipalities and PVSC can share current data relating to building permits, inspections and other information for to a property.

Conceptual Architecture Diagram



PDX Architecture Diagram



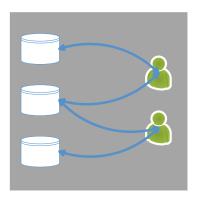
PDX Enables more Strategic Change

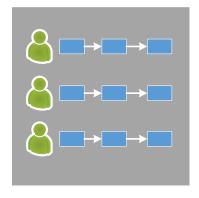
Data Integration

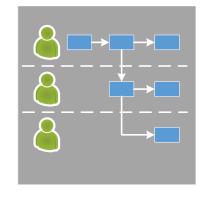
Workflow Integration

Workforce Integration

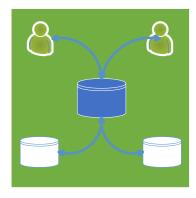


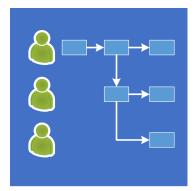


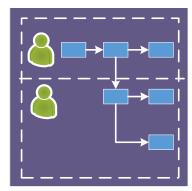












- Integrated data silos
- Shared data standards
- Improved data sharing, access and quality

- Reduced wasted effort
- Improved tracking for processes and triggers
- More efficient use of resources
- Eliminate duplicate effort across orgs.

Provincial Cost to Manage Permits - 2013

	Average Cost Per Permit (FTE + Travel)*	# New Permits (2013)	Provincial Cost
Municipalities	\$563	11912	\$6,701,471
PVSC	\$67	11912	\$803,465
		Total Estimated Provincial Cost	

^{*}For Municipalities, average cost was based on calendar year of 2013 For PVSC, average cost was based on fiscal 1-year period of 2013/14

Business Case: Benefits

Qualitative Benefits

Potential benefit areas include:

- Administrative efficiencies from automated interfaces (reduced or eliminate need for double data entry and efforts associated with tracking sheets/reconciliation of permit data between municipalities and the PVSC)
- Access to a high quality and current data repository for multiple departments and agencies (e.g. Stats Canada, CMHC, CRA)
- Reduction in # appeals and adjustments due to improved "state of construction"
- Facilitates progress towards legislative change for more timely assessment updates on the roll
- Improved efficiency for PVSC relating to commercial accounts

Quantitative Benefits

- Decreased costs for PVSC
 - Increased efficiency for PVSC field visit process (travel costs, # visits). PVSC staff report that on average 20-25% of field visits have to be repeated due to no or limited progress on the property.
- Potential increase in revenue for Municipalities
 - Increased accuracy (% completion) of in-progress development on the roll would lead to increased tax revenue for municipalities.

Quantitative Benefits

Increased efficiency for PVSC field visit process

- If PVSC had up-to-date inspection information related to municipal permits, the number of visits where minimal progress has taken place could be reduced.
- The table below demonstrates the potential cost savings for PVSC.
- Based on # FVR's recorded for 2013:
 - # FVR's in 2013 + Carryover = 12705
 - Estimate cost/FVR = \$70

Business Case Assumption

Potential savings in 1-year period if field visits could be reduced by:											
5	5% 10%		15%		20%		25%				
FVR	Approx. \$	FVR	Approx. \$	FVR	Approx. \$	FVR	Approx. \$	FVR	Approx. \$		
Reduction	Value	Reduction	Value	Reduction	Value	Reduction	Value	Reduction	Value		
635	544,000	1271	\$89,000	1906	\$133,000	2541	\$177,000	3176	\$222,000		

Quantitative Benefits

Increased accuracy (% completion) of in-progress development on the roll would lead to increased tax revenue for municipalities

For Residential and Resource*:

Increase in roll
attributable to
new
development

Average Tax
Revenue
generated due
to new
development

Scenarios for increases to Total Tax Revenue due to increased accuracy of the assessment roll:

Potential increase in tax revenue in 1-year period								
2%	5%	8%						
Approx. \$ Value	Approx. \$ Value	Approx. \$ Value						
\$220,467	\$551,166	\$771,633						

Business Case Assumption

^{*} Commercial properties were excluded from the above calculation. Today, more information is known about the level of work completed for these properties based on Commercial Assessor fact-finding practices, and therefore the potential percentage increase in tax revenue is likely lower.

Business Case: To-Be Costing

Context - Systems in Use

			% Assessed
System	# Municipalities	% of Permits	Value
Town Suite	25	32%	14%
Custom (CBRM)	1	8%	8%
Spreadsheet	6	4%	2%
HRM (Hansen)	1	25%	60%
Paper	9	3%	1%
Subtotal	42	72%	85%
Custom (In House)	8	13%	7%
CityView	1	4%	3%
LDO	1	6%	2%
MiLisa	1	2%	1%
Unknown	1	3%	2%
Subtotal	12	28%	15%
Total	54	100%	100%

Business Case Assumption

Cost/Benefit Assessment

5 Year Projections	* Estimated Savings	5	Investment	Operations		Cost +/-	C	Cumulative +/-
Year 0 - Build	\$ -	\$	1,045,264	\$ -	-\$	1,045,264	-\$	1,045,264
Year 1	\$ 564,251	\$	-	\$ 62,600	\$	501,651	-\$	543,613
Year 2	\$ 564,251	\$	-	\$ 38,600	\$	525,651	-\$	17,961
Year 3	\$ 564,251	\$	-	\$ 38,600	\$	525,651	\$	507,690
Year 4	\$ 564,251	\$	-	\$ 38,600	\$	525,651	\$	1,033,341
Year 5	\$ 564,251	\$	-	\$ 38,600	\$	525,651	\$	1,558,993
	\$ 2,821,257	\$	1,045,264	\$ 217,000	\$	1,558,993		

- Estimated Savings based on initial scope (see slide 33)
 - 85% of potential increase in assessed value + 72% of potential decrease in PVSC field visits (\$551,166 * 0.85 + \$133,000 * 0.72)
- Break even after approx. 2 years with current assumptions
- Lowering assumptions to 2.5% increase in Assessed value and 5% decrease in PVSC travel costs still delivers positive business case over 5 years

Business Case: Investment Fund Recovery

Investment Recovery

- PVSC Technology Advancement Fund is target initial source of funding for project, if approved.
- Fund requires a replenishment plan if balance falls below \$1.5M
 - Project requirements will result in this occurring
- Replenishment principles consistent with eDelivery project
 - Fund in proportion to transaction volume and benefits
 - Ability to pay

Benefit Distribution

Benfits Summary											
5 Year Projection		PVSC		HRM		CBRM		Other Mus			
Year 0 - Build	\$	-									
Year 1	\$	33,160	\$	330,700	\$	44,093	\$	92,535			
Year 2	\$	57,160	\$	330,700	\$	44,093	\$	92,535			
Year 3	\$	57,160	\$	330,700	\$	44,093	\$	92,535			
Year 4	\$	57,160	\$	330,700	\$	44,093	\$	92,535			
Year 5	\$	57,160	\$	330,700	\$	44,093	\$	92,535			
5 Year Total	\$	261,800	\$	1,653,499	\$	220,467	\$	462,675			
% of Benefit		10%		64%		8%		18%			
% Project Cost	\$	105,313	\$	665,146	\$	88,686	\$	186,118			

Future Potential of the Concept/Platform

- In the future, PDX could be expanded to provide additional functionality:
 - Track other types of "permits" (e.g. utility connections)
 - Basic workflow within/between organizations
 - Track other types of inspections (e.g. Fire)

Investment Recovery

- HRM 25% of permits and 64% of benefits blend at 42% for cost recovery
- CBRM 8% of permits and 8% of benefits use 8% for cost recovery
- Other Municipalities 67% of permits and 18% of benefits use 18% for cost recovery
- PVSC 10% of Benefits, Process all permits use 32% for cost recovery

Cost Sharing	Option A			Option B		
Organization(s)	% Share	C	ost Share	% Share	Cost Share	
PVSC	32%	\$	334,484	50%	\$	522,632
HRM	42%	\$	439,011	42%	\$	439,011
CBRM	8%	\$	83,621	8%	\$	83,621
Remaining Mus	18%	\$	188,148	0%	\$	-
Total	100%	\$	1,045,264	100%	\$1	L,045,264

Discussion

- IPSC Recommends proceeding with implementation
- Market scan demonstrated that building solution is most cost effective approach
- Decision to proceed

Appendix Business Case Background Financial Information

As-Is Costing Purpose

To estimate the current people and travel costs for work related to permits in Nova Scotia:

For Municipalities:

Average cost to process permits and perform related inspections

For PVSC:

Average cost to perform field visits associated with municipal permits

Formula

Basic Formula for work related to building permits/inspections:



For each Municipality, the estimated Total Cost per Permit was determined:

Total / # Permits

For PVSC, the estimated Total Cost per Field Visit (related to permits) was determined:

Total / Field Visit

Approach and Assumptions - Municipalities

- The 9 municipal organizations interviewed provided estimates related to the FTE's and travel costs associated with the building permits
- Information was provided in one or several of the following ways:

FTE cost:

- Total FTE budget
- # of people involved (Admin, Building officials and other (if applicable))
- % time spent on Building Permit or Inspection function

Travel cost:

- Total travel budget
- Mileage

Assumptions:

- Estimate annual salary for administrative staff (if not provided) \$35,000
- Cost for benefits 20% of salary
- If a salary range was provided, mid-point was used
- Per kilometre rate \$0.45/km

Approach and Assumptions - PVSC

PVSC costs associated with building permits were estimated for the 2013/2014 and 2014/15 Fiscal Years

FTE cost:

- Approximate % Time in a 1-year period associated with permits:
 - Field Assessors 40%
 - Residential Assessors help when required approx. 4 weeks/year 8%
 - Commercial Assessors help when required approx. 2 weeks/year 4%

Travel cost:

Costs include monthly travel allowance + mileage, meals, accommodations

Assumptions:

- Estimate annual salary for administrative staff \$35,000
- Cost for benefits 20% of salary
- Salaries used for assessors were within upper range of salary grid as most have long tenure with PVSC
- Per kilometre rate \$0.45/km
- Assumed that every field assessor receives a monthly travel allowance (In reality, about 90% receive it)
- For the purposes of estimating values for 2014/15 fiscal year, it was assumed that the travel costs related to mileage, meals and accommodation will be the same as reported for 2013/14

Municipalities - Estimated Cost/Permit and Cost/Inspection

Cost estimate per permit and inspection based on FTE and Travel Costs provided by Municipal Workshop participants

Municipality	Total Cost per Permit - 2013 (or reported as "on average")	Total Cost per Inspection - 2013 (or reported as "on average")
Halifax	\$539	\$95
Cape Breton Regional Municipality	\$319	\$120
Municipality of the District of Lunenburg	\$304	\$149
Municipality of the District of Yarmouth	\$807	\$205
Municipality of the County of Annapolis	\$597	\$121
Municipality of the District of Argyle	\$845	\$108
Municipality of the District of Chester	\$519	\$86
Municipality of East Hants	\$673	\$131
Eastern District Planning Commission (EDPC)	\$460	\$180
Average (all Municipalities interviewed)	\$563	\$133
Average (excluding Halifax)	\$566	\$138

As-Is Costing PVSC - Fiscal Year 2013/14

FTE's involved in Building Permits/Field Visits	#	Estimated % Time spent on Permits	FTE related	Salary	Benefits (+20%)	FTE Cost Related to Permits ((Sal+Ben) X FTE related to permits)
Field Assessors	25.0	40%	10.0	\$50,792	\$60,950	\$609,500
Residential Assessors	21.0	8%	1.6	\$64,041	\$76,850	\$124,142
Commercial Assessors	8.0	4%	0.3	\$69,198	\$83,037	\$25,550
Admin	6.0	5%	0.3	\$38,000	\$45,600	\$11,400
					FTE Total	\$770,591

Annual travel cost related to Building Permits/Field Visits	#	Estimated % Time spent on Permits	FTE related	Average Travel Cost per Year (from Grace)		Average Travel Cost relating to Permits (Avg Travel Cost per Year X FTE related to Permits)
Field Assessors	25.0	40%	10.0	\$10,182		\$101,823
Residential Assessors	21.0	8%	1.6	\$8,053		\$13,009
Commercial Assessors	8.0	4%	0.3	\$6,850		\$2,108
					Travel Total	\$116,939

FTE + Travel Costs related to Permits \$887,531

Year: 2013	Carryover of open FVR's between 2008-2012	Total
11330	1375	12705
11912	1233	13145

FVR Count: Permit Count:

Total cost per Field Visit	\$70	
Total cost per Permit	\$68	

As-Is Costing Sample Municipality

FTE's involved in Bldg. Permits/Inspections	#	% Time spent	FTE		Average Salary	Benefits (+20%)	FTE Cost
Admin 1	1.0	70%	0.70)	\$35,000	\$42,000	\$ 29,400
Bldg Official 1	1.0	100%	1.00)	\$55,000	\$66,000	\$ 66,000
Bldg Official 2	1.0	75%	0.75	5	\$55,000	\$66,000	\$ 49,500
						FTE Total	\$144,900
Annual travel cost related to building inspections \$ 36,000							
Total Cost (FTE + Travel)							\$180,900
		# Permits i	n 2013	303	Total cost per permit \$597		
	#	Inspections in	n 2013	1500	Total cost per inspection \$121		

Key Assumptions/Constraints

- For business case approval purposes, build estimates are being used. Subsequent phase will determine if marketplace can provide more cost effective solution.
- Initial solution scope will include:
 - PVSC
 - HRM
 - CBRM
 - Interested TownSuite users
 - Interested Paper/Spreadsheet Users
- PVSC, HRM and CRBM and other interested municipalities with in-house staff will create their own adapters and carry out internal process work. This cost will not be recovered from the project.
- Given the prevalence of TownSuite, the project cost does include an estimate of integration costs for the product.

Key Assumptions con't

- Scope of Mobile Application includes Permit and Inspection functions and photograph functions
- StatsCan and CMHC reports can be replaced with feeds to Open Data Exchange (ODX)
- All NS PIDs are available in SAI for validation
- All interfaces are RESTful JSON API
- Access Control is separate from SAI and eDelivery
- Mobile application will use the IPSC Identity Service for Authentication/Authorization
- Digital media is available from MU system for upload
- iasWorld can integrate digital media for permits and inspections
- Mobile application does not replace Municipal Adapters or Web Portal (used in addition to)

Estimated Implementation Costs

Implementation Costs		
Component	Build	
PDX ImplementationTeam Cost	\$	869,360
Contingency @ 15%	\$	130,404
Hardware cost (\$1300 * 35 users)	\$	45,500
TOTALS	\$	1,045,264

Implementation Team estimates			
Role	Effort	Cos	it
PM	196	\$	205,800
Architect	228	\$	191,520
Developer	252	\$	201,600
Business Analyst	161	\$	135,240
Privacy SME	3	\$	2,700
Townsuite Adapter Implementation	100	\$	112,500
PVSC Process Analyst	60		
CBRM Developer	100		
HRM Developer	100		
PVSC Developer	88		
Project Expenses (travel, technology)		\$	20,000
TOTALS		\$	869,360

Estimated Annual Operating Cost

Annual Operations Costs		
Component	Build	
External Tech Support	\$	24,000.00
Tech Operations (1/3 FTE)	\$	35,000.00
Infrastructure	\$	3,600.00
Mobile data plan (per user \$720)	\$	25,200.00
Vendor Support/Licencing	-	
TOTALS	\$	62,600.00

- Assumes PVSC will host and operate solution
- External technical support for Year 1 only, assume PVSC can maintain independently Year 2 onward