

Industrial Data eXchange



IDX Project Team Proposal

2.1 Purpose

There is an opportunity to build a new digital industrial data exchange platform by PIDX members for PIDX members.

2.2 Scope

The initiative focuses on building an API-driven and cloud-based industrial data exchange platform to establish and share strategic data sources among the PIDX ecosystem of operators, suppliers, and IT companies.

2.3 Goal

The industrial data exchange platform will: 1) consolidate and share data across the entire ecosystem and empower members to derive their own insights and 2) effectively leverage PIDX's existing and future standards.

2.3.1 Identify criteria for success of the deliverables / specification as deployed in industry.

1) Cloud-based 2) API-driven 3) publishes PIDX standards 4) measured by size of data available in the data exchange 5) measured by number of API calls

2.3.2 Identify all of the stakeholders of which you are aware. Operators, Suppliers, and Marketplaces

2.3.3 Identify the stakeholders who are willing to join the work effort. (See Sponsor & Participants) Chevron, BHGE, Microsoft, and others



IDX Project Team Proposal

2.4 Proposal

There is an opportunity to build a new digital industrial data exchange platform by PIDX members for PIDX members. The initiative focuses on building an API-driven and cloud-based industrial data exchange platform to establish and share strategic data sources among the PIDX ecosystem of operators, suppliers, and IT companies.

The industrial data exchange platform will: 1) consolidate and share data across the entire ecosystem and empower members to derive their own insights and 2) effectively leverage PIDX's existing and future standards. Some example use cases for this industrial data exchange platform include invoice management, virtual management of physical assets, logistics optimization, etc.

4.0 List benefits for all PIDX users

Wider adoption of PIDX standards; ease to consume Opportunity to build data ecosystem across companies for important challenges, e.g. carbon footprint, logistics operations, open manufacturing



IDX Project Team Proposal

5 Sponsor and Participants

PIDX member/company sponsoring development of these specifications/this project:

Member	Company	E-Mail Address
Rachel Shaffer	Chevron	rachel.shaffer@chevron.com
Mandar Moghe	Schlumberger	mmoghe@cameron.slb.com
Trish Nguyen	BHGE	trish.nguyen@bhge.com



Architecture Design - Start with Something Simple

Develop API Interfaces to various master data tables ALREADY managed by PIDX

Provide JSON Objects as results

Use existing PIDX Google Cloud Services and deploy an API Server

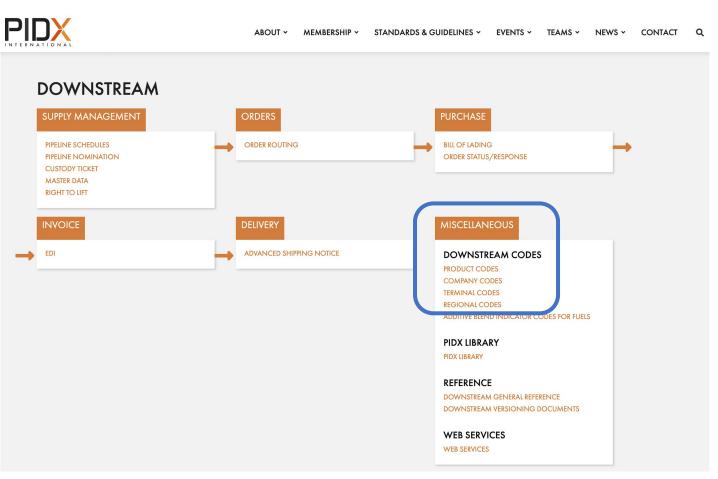


Architecture Design - Start with Something Simple

Develop API Interfaces to various master data tables ALREADY managed by PIDX

Provide JSON Objects as results

Use existing PIDX Google Cloud Services and deploy an API Server – **api.pidx.org**



PRODUCT CODES COMPANY CODES TERMINAL CODES

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Data Sources – Product Codes

New code requests frequently

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15 A21	Unbranded Aviation Gasoline 100/LL	AVIATION GASOLINE										AVIATION GASOLINE		BRENT BOWDEN	SHELL	30-Apr-19		
16 A25	AVIATION GASOLINE			N	v			Ш		ПТ		100/130 HIGH LEAD				31-Doc-92		
17 B00	FUEL ETHANOL	ALTERNATIVE FUEL - Ed79-83		A 79-83	N 7.0-9.	5 N F N	3 1	N N	N N N	NN	NNN	Ed79-83% ETHANOL/21-17% CaRFG3 CARB E85 fuel Class 2		STEVE WOOD	PHILLIPS 66	26-Mar-19		
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18 B01	FUEL ETHANOL	ALTERNATIVE FUEL - Ed85		A 85	Y	A 11	3	+++		+++		Ed85 85% ETHANOL/15% REGULAR GASOLINE		JEAN PICKETT	MAGELLAN	20-Jul-04	-	
19 B02	FUEL ETHANOL	ALTERNATIVE FUEL - Ed80		A 80	Y	F N	3	+++	_			Ed80 80% ETHANOL/20% REGULAR GASOLINE		JEAN PICKETT	MAGELLAN	20-Jul-04		
94 B83	FUEL ETHANOL	ALTERNATIVE FUEL - Ed60		A 60	P 7.8	N F N	3.1	INN	NNN	NY	NNN	Ed60 60% ETHANOL 40% CBOB LOW RVP		JEAN PICKETT	MAGELLAN	19-Nov-20		
95 B84	SHELL NEMO ADDITIVE	SHELL NEMO ADDITIVE										Nemo 1127 Additive		Michele Iacopino	Gulf Oil LP	17-Sep-21		
96 B85 97 B86	ETHANOL-FUEL GRADE W/ RIN	ETHANOL-FUEL GRADE W/ RIN							NNN			VICES WHITE DOT AND DROP DROP		SEAN CORBETT	MUSKET	20-Oct-21	_	
97 B86 98 B87	FUEL ETHANOL FUEL ETHANOL	ALTERNATIVE FUEL - Ed65 ALTERNATIVE FUEL - Ed65 TOP TIER		A 65	0	N F N			NNN			Ed65% ETHANOL/35% RBOB REG Ed65% ETHANOL/35% RBOB REG - TOP TIER ADDITIZED		JEAN PICKETT JEAN PICKETT	MAGELLAN MAGELLAN	28-Apr-22 28-Apr-22	-	
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99 <u>C00</u>	MIDGRADE	CG		11 10	G		3 0	4 N N	NNN	NYJ	NNN		-	SARA GLEASON	PHILLIPS	5-Nov-97	-	
100 <u>C01</u>	MIDGRADE	CG	91.5	A 10	G 9	N F N	3 1	4 N N	NNN	NY)				SARA GLEASON	PHILLIPS	5-Nov-97	_	
101 C02	MIDGRADE	CG	89	A 10	G	N F N	3 1	NN	NNN	NY	NNN			JIM PATTERSON	TEXACO	13-Mar-95		
102 C03	MIDGRADE	CG	88	A 10	G 7	NFN	3 1	INN	NNN	NY	NNN	SUBOCTANE		TIM DRINKARD	SHELL OIL PRODUCTS	3-May-13		
125 COP	MUL 89 VOC2 RFG ETOH 3.5-4.0 T250 USA	RFG	89	A 10	Y	NEN	3 1	INN	NNN	NY	NN	TOP TEIR ADDITIZED		Janie Morales	Shell	29-Jun-18		
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129 COT	MIDGRADE	RBOB	90		G 13.5	N S N	11	NN	NYN	YNY	YNN			Denise Kay Schardt	FLINT HILLS	14-Jan-21		
397 CPB	MIDGRADE	CG - GPA	88	N	P 9	NFN	3 1	INN	NNN	NY	NNN	GPA GASOLINE		RANDY THOMPSON	CONOCOPHILLIPS	8-Oct-04		
398 CPC	MIDGRADE	CG - GPA	88	A 8	Р	NEN	1 1	NN	NNN	NYD	NNN	GPA GASOLINE		RANDY THOMPSON	CONOCOPHILLIPS	8-Oct-04		
399 CPD	MIDGRADE	CG - GPA	87	A 10	P 7.8	NEN			NNN			GPA GASOLINE		RANDY THOMPSON	CONOCOPHILLIPS	13-Apr-05		
	MIDGRADE	CG - GPA	87	100 100	P 7.8	NEN	3 1	INN	NNN	NYD	NNN	GPA GASOLINE		RANDY THOMPSON	CONOCOPHILLIPS	15-Apr-05		
	MIDGRADE	CG - GPA	88	N	GQ	NEN	3.1	INN	NNN	NV	NNN	GPA GASOLINE		BARRY DUFFIN	CONOCOPHILLIPS	4-Apr-08		
	MIDGRADE	CG	88	N	v	NEN		NN	NNN	NY	NNN	TOP THER ADDITIZED		TONY PATAK	PHILLIPS 65	25-Sep-14		
403 CT9	MIDGRADE	CG-CARB	89	N	G 2	NEN	2.0	INN	NNN	NVD	NNN	CARB	-	JERRY HINSON	EXXON	29-Feb-96		
403 CI9	MIDGRADE	Brunze Ethanol Gasoline	87		D /	N P N			NNN			Canada Bronze Ethanol Gasoline	-	Tim Drinkard	Shell Oil	6-Oct-16		
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	PIDX-ProductCodes-10_05_2022.xlsx	Oct 5, 2022 at 2:44 PM	Microsok (.xls)
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	PIDX-ProductCodes-06_14_2022.xlsx	Jun 14, 2022 at 9:54 AM	Microsok (.xls
	PIDX-ProductCodes-06_06_2022.xlsx	Jun 7, 2022 at 6:54 AM	Microsok (.xls:
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-	PIDX-ProductCodes-08_28_18.xls	Oct 1, 2018 at 1:04 PM	Microsook (.xl

PRODUCT CODES COMPANY CODES TERMINAL CODES



Data Sources – Product Codes

New code requests frequently

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13	Product definition 2	Description 3	Cetaméoctane 4	<pre>4 ygenated/rbob type 5 Oxygenate percent % v 6 4</pre>	Ryp percentage 8	10 Ineible/spere (f/s) 11	Sulphur content 13		2 4 4 2 4 4 2 4	4 4 4 0	410 411	M12	Commons 14	A ecode 15 Requester 16	Company 17	Date code assigned 18	-
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15 A21	Unbranded Aviation Gasoline 100/LL	AVIATION GASOLINE								+			AVIATION GASOLINE	BRENT BOWDEN	SHELL	30-Apr-19	
16 A25	AVIATION GASOLINE			N									100/130 HIGH LEAD			31-Dec-92	
17 B00	FUEL ETHANOL	ALTERNATIVE FUEL - Ed79-83		A 79-83	7.0-9.5	N F	N	3 N N	NNN	N N N	NNI	N	Ed79-83% ETHANOL/21-17% CaRFG3 CARB E85 fuel Class 2	STEVE WOOD	PHILLIPS 66	26-Mar-19	0
18 B01	FUEL ETHANOL	ALTERNATIVE FUEL - Ed85		A 85 Y	·	F	N	3					Ed85 85% ETHANOL/15% REGULAR GASOLINE	JEAN PICKETT	MAGELLAN	20-Jul-04	
19 B02	FUEL ETHANOL	ALTERNATIVE FUEL - Ed80		A 80 Y	,	F	N	3					Ed80 80% ETHANOL/20% REGULAR GASOLINE	JEAN PICKETT	MAGELLAN	20-Jul-04	-
94 B83	FUEL ETHANOL	ALTERNATIVE FUEL - Ed60		A 60 T	7.8	N F		3 N N	NNN	NNV	NNI		Ed60 60% ETHANOL 40% CBOB LOW RVP	JEAN PICKETT	MAGELLAN	19-Nov-20	-
95 B84	SHELL NEMO ADDITIVE	SHELL NEMO ADDITIVE			7.0								Nemo 1127 Additive	Michele Iacopino	Gulf Oil LP	17-Sep-21	+
96 B85	ETHANOL-FUEL GRADE W/ RIN	ETHANOL-FUEL GRADE W/ RIN											· · · · · · · · · · · · · · · · · · ·	SEAN CORBETT	MUSKET	20-Oct-21	
97 B86	FUEL ETHANOL	ALTERNATIVE FUEL - Ed65		A 65 (N F	N	3 N N	NNN	NNY	NNI	N	Ed65% ETHANOL/35% RBOB REG	JEAN PICKETT	MAGELLAN	28-Apr-22	
98 B87	FUEL ETHANOL	ALTERNATIVE FUEL - Ed65 TOP TIER		A 65 0	3	N F		3 N N	NNN	NNY	NNI	N	Ed65% ETHANOL/35% RBOB REG - TOP TIER ADDITIZED	JEAN PICKETT	MAGELLAN	28-Apr-22	
99 C00	MIDGRADE	cg	91.5	A 10 (N F			NNN					SARA GLEASON	PHILLIPS	5-Nov-97	
100 C01	MIDGRADE	cg	91.5	A 10 0	3 9	NF			NNN					SARA GLEASON	PHILLIPS	5-Nov-97	
101 C02	MIDGRADE	cg	89	A 10 0	3	N F		3 N N	NNN	NNY	NNI	N		JIM PATTERSON	TEXACO	13-Mar-95	
102 C03	MIDGRADE	CG	88	A 10	17	NF	100		NNN				SUBOCTANE	TIM DRINKARD	SHELL OIL PRODUCTS		
125 COP	MUL 89 VOC2 RFG ETOH 3.5-4.0 T250 USA	RFG	89		,	N F			INNN N				TOP TEIR ADDITIZED	Janie Morales	Shell	29-Jun-18	
125 COP		RFG	89					2 11 1		NNN	NN	-	TOP TEIR ADDITIZED	Janie Morales	Shell	29-Jun-18	
127 COR		RBOB	90		3 9.0	N F N S		3 N N		NVN	N N	NT.	TOP TEIK ADDITIZED		FLINT HILLS	14-Jan-21	+
128 COS		RBOB	90			N S		I NN	NNY	NVN	VND	N		Denise Kay Schardt Denise Kay Schardt	FLINT HILLS	14-Jan-21	+
129 COT		RBOB	90			N S		INN	NNY	NYN	VNY	N		Denise Kay Schardt	FLINT HILLS	14-Jan-21	
397 CPB	MIDGRADE	CG - GPA	88		9	N F			NNN				GPA GASOLINE	RANDY THOMPSON	CONOCOPHILLIPS	8-Oct-04	† T
398 CPC	MIDGRADE	CG - GPA	88	A 8 1		N F	N	3 N N	NNN	NNY	NNI	N	GPA GASOLINE	RANDY THOMPSON	CONOCOPHILLIPS	8-Oct-04	+
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PRODUCT CODES COMPANY CODES

TERMINAL CODES

IDX

Data Sources – Company Codes

Infrequent Changes

PIDX_Company_Codes_1_21_22.xlsx	0	Jan 21, 2022 at 11:11 AM	Microsok (.xlsx)
PIDX_Company_Codes_4_1_22.xlsx	9	Apr 1, 2022 at 10:32 AM	Microsok (.xlsx)
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PIDX_Company_Codes_9_1_22.xlsx	9	Sep 1, 2022 at 10:22 AM	Microsok (.xlsx)
PIDX_Company_Codes_10_3_22.xlsx	0	Oct 3, 2022 at 8:53 AM	Microsok (.xlsx)
PIDX_Company_Codes_10-22-20.xlsx	0	Nov 18, 2020 at 7:00 AM	Microsok (.xlsx)

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		Version	1: 3-2-2022						
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NOTE	non-North American companies begin with 8 or 9								
	ay utilize 3 positions	PIDX Procedures for Standards Developm	ent, a copy of which is availa	able at <u>www.pidx.org</u>	procedures,				
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possibly	unused								
assign a	a new code or retire one that is obsolete, please	e contact companycodes@pidx.c	org.						
Compa	any name	Address	City	▼ St	▼ Zip	Phone	Contact	▼ Contacts	 Assigned
	vin LLC	333 SE 2nd Ave STE 2000	Miami	FL	33131	305.301.1178	Keith Harvin	kh@stonewin.org	02.22.21
	al Energy Inc	440 Louisiana ST. STE 1818	Houston	TX	77002	281.455.3139	Blake Hale	blake.hale@jglobalenergy.com	03.23.21
	de placeholder	440 Edulaiana ST, STE TOTO	nouston	12	11002	201.435.5135	Diake Hale	blake.nale@jglobalenergy.com	05.25.2
Antler		100 Deces Dides	San Antonio	тх	78260	210,347,1632	Luke Kine et		04.27.21
	5,	109 Breeze Ridge					Luke Kinney		
	Convenience Stores	P.O. Box 347	Columbus	IN	47202	812.379.9227	Alex Miller	tmiller3@circlek.com	5.5.15
	orth Energy, LLC	10346 Brecksville, Rd	Brecksville	OH	44141	440-792-4200 x 108	Mary B. Lyden	mblyden@truenorth.org	5.13.15
	ickson Oil, Inc	1031 Nixon Rd	Mt Shasta	CA	96067	530.926.2675	Sheila Johnson	sheila Johnson	5.15.15
	Petroleum Partners LLC	8350 N. Central Expressway, M218		TX	75206	972.684.5507	Eugene Gonzalez	egonzalez@empirepetroleum.com	11.7.16
	ia energy trading (phillips 66)	20 e greenway plaza ste 650	houston	tx	77046	832-209-2431	Maria Elizalde		
JK Petr	roleum Inc	4668 Amboy Rd	Staten Island	NY	10312	718.984.9551	Mike	jkpetroleum@aol.com	5.19.15
Jenkin	s Oil Co	1100 W. Industrial Rd	Cedar City	UT	84720	435.58.6931	Andrea Johnson	andy@jenkinsoil.com	12.2.16
Somme	ers Oil	1000 Sommers Blvd	Richmond	GA		912.312.3648	Brenda Sommers	Brenda.Sommers@sommersoil.com	
Eight-e	aight Oil	455 N. Poplar	Casper	WY	82062	307.237.9301	G. C. Herz		5.26.15
United	Fuel Supply	3950 S. 700 E. Suite 202	Salt Lake City	UT	84407	801.327.8696	Rodney Anderson		6.3.15
Woodfe	ord Oil Company	13th & Livingston Box 567	Elfins	WV	26241	304-591-1196	Roger Corder	rcorder@woodfordoil.com	6.10.15
Romin	e Oil Co	837 E. Collin Rave	DeQueen	AR	71832	870-584-3417	Jim	jim3417@alltel.net	6.10.15
Costco		999 Lake Drive	Issaguah	WA	98027	425.416.5251	Naill Alnatour	nalnatour@costco.com	6.18.15
Almone	d Oil Co.	504 se Williston Rd	Gainesville	FL	32641	352.376.5131	Chris Almond	calmond@almondoilcompany.com	6.25.15
	auer Oil Co	453 SW Washington St.	Hillsboro	OR	97123	503-648-2531	Kevin Bretthauer	kevin@bretthauer.com	6.29.15
	vest Convenience Stores	4001 Penbrook, Suite 400	Odessa	TX	79762	432.438.6241	Scott Prall	scott.prall@alonusa.com	6.30.15
	or Plus Energy Services	8199 McKnight Rd	Pittsburgh	PA	15237	412.364.2200	David Chetsko	dchetsko@superiorpetroleumcomp	
	y Industries	18105 Transcanada	Kirkland	QC	H9J3Z4	412.004.2200	David Offetako	donetako@adpenorperoleuncomp	7.27.15
Hartley		319 Wheeling Ave	Cambridge	OH	43725	740.432.2328	Tim Mulrooney	tmulrooney@thehartleyco.com	7.28.15
	Oil - St. Louis	8235 Forsyth Blvd.	St. Louis	MO	63105	314.889.9600	David Paul	dpaul@apexoil.com	7.30.15
	ated Asphalt Partners, LLC		St. Louis Roanoke	VA	24011	540-853-4307			8.3.15
	Distributors	130 Church Ave SW	San Antonio	TX	78217	210.826.3786	Doug Crowe Ashraf Sarfani	dcrowe@associatedasphalt.com	8.3.15
		1777 NE Loop 410			10211			info@quest-fuel.com	
	Energy Trading	225 Union Blvd	Lakewood	co	7000	303.991.3435	Tim Penney	tpenney@uetllc.com	8.12.15
	Bros Inc	61 Lincoln Hwyy	South Kearney	NJ	7032	973.463.7701	Alex Tullo	alexjr@tullotransport.com	8.17.15
Bazell		15140 State Rt 328 Box 2	Logan	OH	43138	740-385-5430	Joe Wolf	joe@bazellfuels.com	8.17.15
Dozier		1919 Hwy 43 North	Thomasville	AL	36784	334.636.2116	Brad Gibson	brad@dozieroilandtire.com	8.17.15
Beaud		630 proctor ave nw	Elk River	MN	55330	763.441.2383	Kenneth Beaudry		11.19.1
	LL OIL CO, INC	2307 GAUGE BLVD. E	SLIDELL	LA	70461	985.643.5256	GEORGE WEST	GWEST@SLIDELLOIL.COM	12.15.16
	L DIRECT	P.O. BOX 135	RANDOLPH	MA	2386	800.900.7787	TIM CALLOW	TCALLOW@DIESELDIRECT.COM	68.17
	Petroleum	25 Braintree Hill Office Park #409	Braintree	MA	2184	781.356.1960 x36	Curtis Akins	cakins@superpetroleum.com	9.2.15
F.L.Ro		P.O. Box 1964	Springfield	MA	1102	413.781.7444	Frank Roberts	froberts@firoberts.com	9.4.15
0	o Partners Marketing & Terminals	1801 Market St	Philadelphia	PA	19103	215 246 8468	Connie Blinebury	cmblinebury@sunocoinc.com	9 11 15

PRODUCT CODES COMPANY CODES TERMINAL CODES

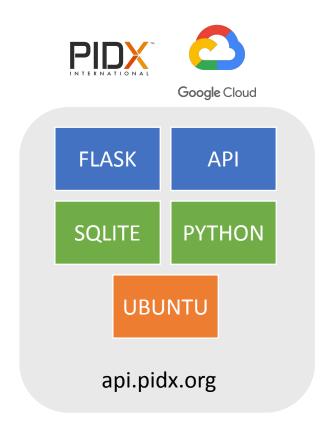


Data Sources – Terminal Codes

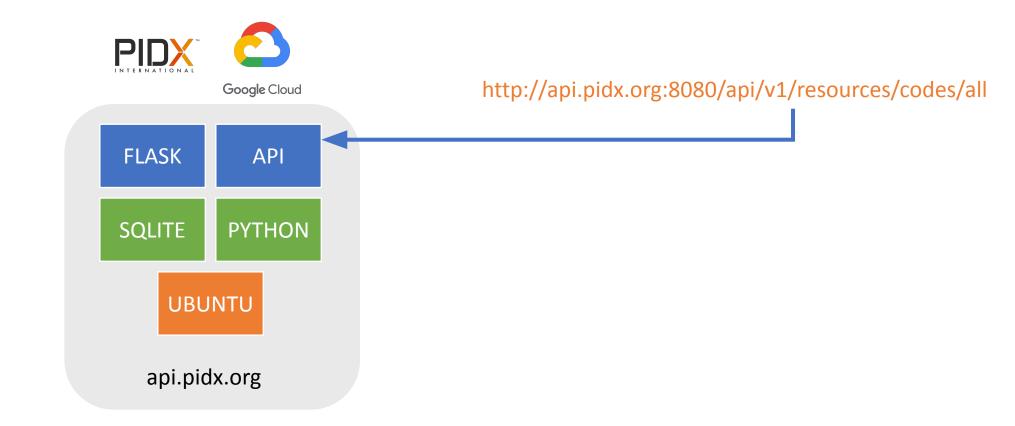
Mostly Static Data

A	В	С	D	E	F	G	Н	
Submitter	Terminal Owner Name	TERMINAL ID	Address	TERMINAL CITY/TOWN/LOCALITY	TERMINAL COUNTY/PROVINCE	TERMINAL POSTAL CODE	TERMINAL COUNTRY	TERMINAL GEO COORDINATES
Shell	BotanyBay B Vopak depot	TAU000001	49 Friendship Road	Port Botany		2036	Australia	
Shell	Botn Vopak BitDepot	TAU000002	Unwin Street	Granville		2142	Australia	
Shell	Kwinana Coogee depot	TAU000003	Patterson Road	Kwinana		6167	Australia	
Shell	Hobart Caltex depot	TAU000004	Selfs Point Road	New Town		7008	Australia	
Shell	DarwinEArm Vopak depot	TAU000005	780 Berrimah Road	East Arm		0828	Australia	
Shell	Shell/BP Newcastle	TAU000006	5 Chatham Road	Hamilton		2303	Australia	
Shell	Shell/Caltex Pt Hedland	TAU000007	Wilson Street	Port Hedland		6721	Australia	
Shell	Newcastle Stolthy depot	TAU000008		Newcastle		2300	Australia	
Shell	Birkenhead Mobil depot	TAU000009	Elder Road	Birkenhead		5015	Australia	
Shell	Gladstone BP depot	TAU000010	McLintock Street	Gladstone		4680	Australia	
Shell	Geelong	TAU000011		Geelong			Australia	
Shell	Shell Austria GmbH - Linz	TAT000001	Am Tankhafen 6	Linz		A-4020	Austria	
Shell	Shell Austria GmbH - Lobau	TAT000002	Lobgrundstrasse 3	Wien		A-1220	Austria	
OMV	OMV R&M GmbH	TAT000003	Mannswörtherstraße 28	Schwechat		2320	Austria	
OMV	OMV R&M GmbH	TAT000004	Lobgrundstraße 2	Lobau		1223	Austria	
OMV	OMV R&M GmbH	TAT000005	Wienerstraße 5	St. Valentin		4300	Austria	
DCC Energy Austria	DCC Energy Austria GmbH - Graz	TAT000006	Alte Poststraße 400	Graz		8055	Austria	
DCC Energy Austria	DCC Energy Austria GmbH - Klagenfurt	TAT000007	Flatschacherstraße 87	Klagenfurt		9020	Austria	
DCC Energy Austria	DCC Energy Austria GmbH - Innsbruck	TAT000008	Karwendelstraße 3	Innsbruck		6020	Austria	
OMV	OMV R&M GmbH	TAT000009		Schwechat		2320	Austria	
Shell	TBG	TAT000010		Salzburg			Austria	
Argos	Argos (Varo)	TBE000001	Wiedauwkaai 75	Ghent	Oost-Vlaanderen	B-9000	Belgium	
Argos	Argos (Varo)	TBE000002	Aarschotseweg 26	Herentals	Antwerpen	B-2200	Belgium	
Argos	Argos (Varo)	TBE000003	Schaarbeeklei 600	Vilvoorde	Vlaams-Brabant	B-1800	Belgium	
Argos	Argos (Varo)	TBE000004	Herderstraat 8	Hasselt	Limburg	B-3500	Belgium	
Argos	Argos (Varo)	TBE000005	Pathoekeweg 74	Brugge	West-Vlaanderen	B-8000	Belgium	
Argos	Argos (Varo)	TBE000006	Bossuitstraat 9	Bossuit-Avelgem	West-Vlaanderen	B-8583	Belgium	
ExxonMobil	ExxonMobil	TBE000007	Scheldelaan	Antwerpen		B-2030	Belgium	
ExxonMobil	ExxonMobil	TBE000008	Rue Ernest Solvay 339	SCLESSIN		B-4000	Belgium	
Exxon Mobil	ExxonMobil	TBE000009	Rue de l'Ancienne Poetnce 18	TOURNAL		B-7501	Belgium	
Vopak	Vopak Terminal ACS	TBE000010	Scheldelaan 410 Port no. 503	Antwerpen		B-2040	Belgium	
Vopak	Vopak Terminal Linkeroever	TBE000011	Haandorpweg Port no. 1313	Kallo		B-9130	Belgium	
Vopak	Vopak Terminal Eurotank	TBE000012	Industrieweg 16 Port no. 399	Antwerpen		B-2030	Belgium	
Argos	Argos (Varo)	TBE000013	Pantserschipstraat 301	Ghent	Oost-Vlaanderen	B-9000	Belgium	
Argos	Alca	TBE000014	D'Herbouvillekaai 103	Antwerpen		B-2020	Belgium	
Argos	BML	TBE000015	Rue du Dossay 2	Liège		B-4020	Belgium	
Argos	Vesta	TBE000016	Scheldelaan 470	Antwerpen		B-2040	Belgium	
Exxon Mobil	Total	TBE000017		Feluy			Belgium	
Exxon Mobil	LukOil	TBE000018		Neder-over-Heembeek		B-1120	Belgium	
ExxonMobil	Total	TBE000019		Wandre		0 1100	Belgium	
ExxonMobil	UniTank	TBE000020	Regenbeekstraat 60	Roeselare		8800	Belgium	
ExxonMobil	Total	TBE000021	Hendrik Baelskaai 10a	Oostende		8400	Belgium	
Argos	Argos (Varo)	TBE000022	Wondelgemkaai 142	Ghent	Oost-Vlaanderen	B-9000	Belgium	
Argos	Argos (Varo)	TBE000022	Rue de Berloz 3	Liege	Liege	B-4000	Belgium	
Argos	Argos (Varo)	TBE000024	Kanaaldijk 3	Brussel (Anderlecht)	Bruxelles	B-1070	Belgium	
Shell	PPST (Joint Q8/Delek)	TBE000025	Avenue de l'Indépendance 93	Wandre	or divenes	4020	Belgium	

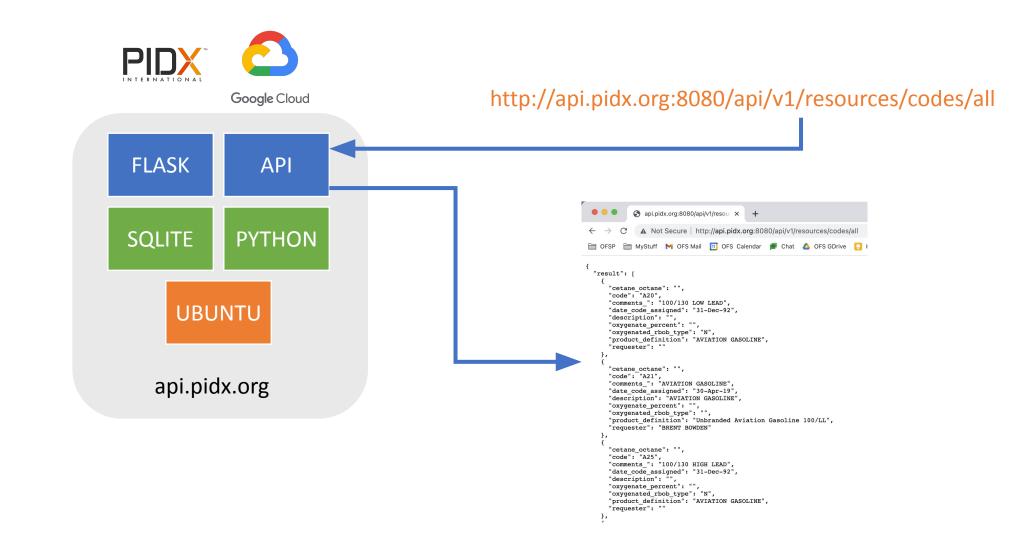














A Not Secure http://api.pidx.org:8080/api/v1/resources/codes/all \leftarrow \rightarrow 🛅 MyStuff 🛛 M OFS Mail 🔟 OFS Calendar 📕 Chat 🔥 OFS GDrive 🌅 I OFSP Ы "result": [Google Cloud codes/all "cetane octane": "", "code": "A20", "comments ": "100/130 LOW LEAD", "date code assigned": "31-Dec-92", "description": "", **FLASK** API "oxygenate percent": "", "oxygenated rbob type": "N", "product definition": "AVIATION GASOLINE", "requester": "" }, SQLITE **PYTHON** "cetane octane": "", "code": "A21", "comments ": "AVIATION GASOLINE", "date code assigned": "30-Apr-19", "description": "AVIATION GASOLINE", UBUNTU "oxygenate percent": "", "oxygenated_rbob_type": "", "product definition": "Unbranded Aviation Gasoline 100/LL", "requester": "BRENT BOWDEN" }, api.pidx.org "cetane octane": "", "code": "A25", "comments ": "100/130 HIGH LEAD", "date code assigned": "31-Dec-92", "description": "", "oxygenate percent": "", "oxygenated rbob type": "N", "product definition": "AVIATION GASOLINE", "requester": "" },

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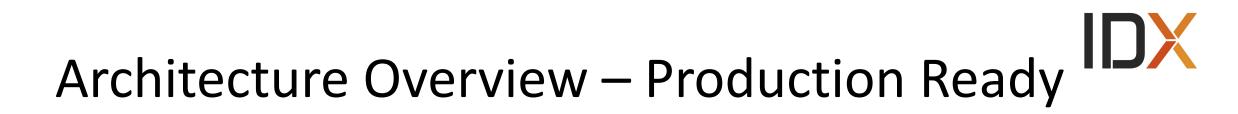
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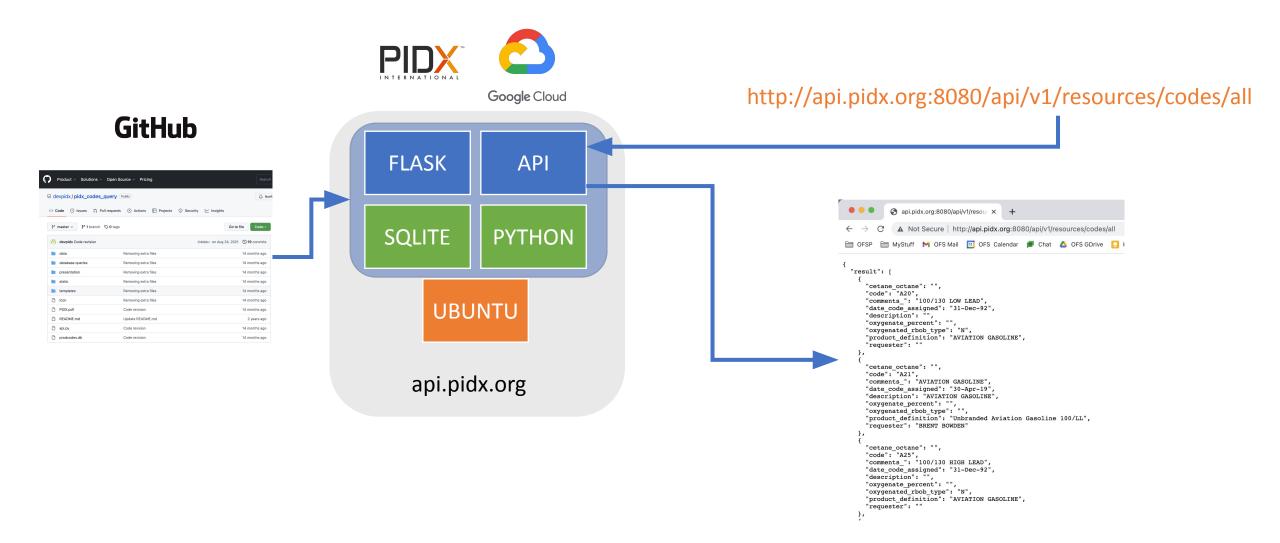


Industrial Data eXchange

DEMO

http://api.pidx.org:8080/api/v1/resources/codes/all







API Interface to master data Return JSON Object with all Master Data from API Web Call http://api.pidx.org:8080/api/v1/resources/codes/all

API Searchable Interface to master data Return JSON Object with subset of Master Data from API Web Call Searchable Product Codes API Examples



API Interface to master data

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Searchable Product Codes API Examples

<pre>result:</pre>		
▼ 0:		{ "result": [
<pre>cetane_octane: code:</pre>	"" "B22"	{
comments_:	"Ed80 80% ETHANOL/20% RBOB REG 85"	"code": "B22", "comments_": "Ed80 80% ETHANOL/20% RBOB REG 85",
<pre>date_code_assigned:</pre>	"10-May-11"	"date_code_assigned": "10-May-11", "description": "ALTERNATIVE FUEL - Ed80",
<pre>description: oxygenate_percent:</pre>	"ALTERNATIVE FUEL - Ed80" "80"	<pre>"oxygenate_percent": "80", "oxygenated_rbob_type": "A",</pre>
<pre>oxygenated_rbob_type:</pre>	"A"	"product_definition": "FUEL ETHANOL", "requester": "JEAN PICKETT"
<pre>product_definition:</pre>	"FUEL ETHANOL"	}
requester:	"JEAN PICKETT"	}



API Interface to master data

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Searchable Product Codes API Examples

<pre>result:</pre>		
▼ 0:		{ "result": [
<pre>cetane_octane: code:</pre>	"" "B22"	{
comments_:	"Ed80 80% ETHANOL/20% RBOB REG 85"	"code": "B22", "comments_": "Ed80 80% ETHANOL/20% RBOB REG 85",
<pre>date_code_assigned:</pre>	"10-May-11"	"date_code_assigned": "10-May-11", "description": "ALTERNATIVE FUEL - Ed80",
<pre>description: oxygenate_percent:</pre>	"ALTERNATIVE FUEL - Ed80" "80"	<pre>"oxygenate_percent": "80", "oxygenated_rbob_type": "A",</pre>
<pre>oxygenated_rbob_type:</pre>	"A"	"product_definition": "FUEL ETHANOL", "requester": "JEAN PICKETT"
<pre>product_definition:</pre>	"FUEL ETHANOL"	}
requester:	"JEAN PICKETT"	}



Industrial Data eXchange

DEMO

IDX

PIDX Product Codes

PIDX Google Cloud Services – API Server – api.pidx.org

API Interface to master data

Product Codes http://api.pidx.org:8080/api/v1/resources/codes/all

Searchable Product Codes

http://api.pidx.org:8080/api/v1/resources/codes?code=B22

Codes by Country http://api.pidx.org:8080/data



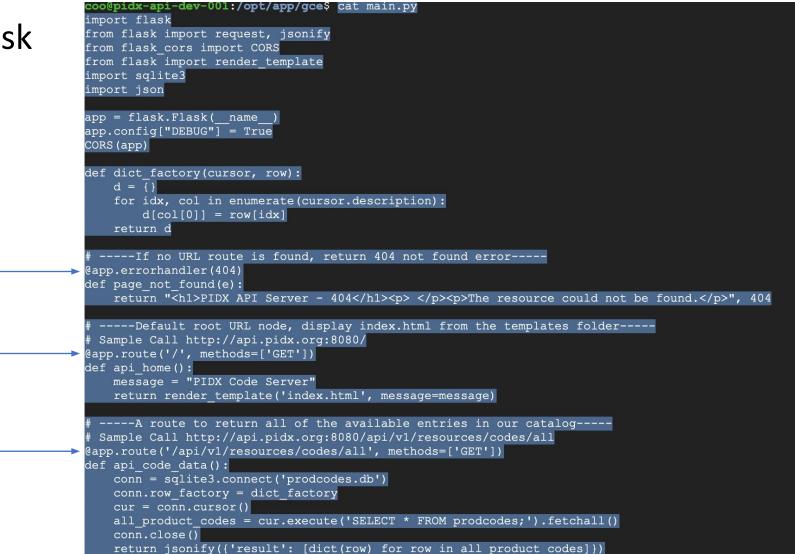
API Enablement with JSON Web Services

Python Code & Flask

Error Handler

Searchable JS Web Form

Get all PRODUCT codes



return jsonify({[dict(row) for row in all product codes]})



API Enablement with JSON Web Services

GitHub

coolpida-api-daw-001r/opt/app/gos% main.py from flask import flask from flask cost menot cost from flask cost import cost from flask import render_template import solltes mport solltes from flask import into the solution of the sol
app = flask_flask(name) app.config("DEBUG") = Truk QOS(app)
<pre>def dict factory(cursor, row):</pre>
↓if no UKL route is found, return 404 not found error depp.errorhander(404) def page not found(e): return *(-)>DIX APE Server - 404 The resource could not be found.*, 404
*Default root DRL node, display index.html from the templates folder # Sample Call http://salp.iduk.org:8080/ 8app.route(//, methods=('03T')] fac spi.home() fac spi.home() return render [emplate('Index.html', message-message)
<pre>+A coute to return all of the avgliable entries in our catalog f Sample Call http://api.vik.org:0006/api.vi/resources/codes/all fep_route('/api.vi/resources/codes/all) fef api_code_lists' for an code_lists' for an code_lists'</pre>

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📮 devpidx / pidx_codes_quer	Y Public		🗘 Noti
<> Code ③ Issues 11 Pull reque	ests 🕑 Actions 🖽 Projects	🛈 Security 🗠 Insights	
រឹង master 🛥 🥇 1 branch 🖒 0 ta	ıgs	Go to fil	e Code -
devpidx Code revision		150dbbc on Aug 24, 2021	🕑 19 commits
ata data	Removing extra files		14 months ago
atabase queries	Removing extra files		14 months ago
presentation	Removing extra files		14 months ago
static	Removing extra files		14 months ago
templates	Removing extra files		14 months ago
🗋 Icon	Removing extra files		14 months ago
PIDX.pdf	Code revision		14 months ago
🗋 README.md	Update README.md		2 years ago
🗋 api.py	Code revision		14 months ago
🗋 prodcodes.db	Code revision		14 months ago

https://github.com/devpidx/pidx_codes_query



Web User Search Interface to master data

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FILTER SEARCH	CETANE OCTANE	CODE	COMMENTS	DATE CODE ASSIGNED	DESCRIPTION	OXYGENATE PERC
		A20	100/130 LOW LEAD	31-DEC-92		
		A21	AVIATION GASOLINE	30-APR-19	AVIATION GASOLINE	
		A25	100/130 HIGH LEAD	31-DEC-92		
		воо	ED79-83% ETHANOL/21-17% CARFG3 CARB E85 FUEL CLASS 2	26-MAR-19	ALTERNATIVE FUEL - ED79-83	79-83



Industrial Data eXchange

DEMO

http://api.pidx.org:8080/



IDX Next Steps

Web Search Development

Downstream group to lead development of Web Search Interface

Convert Data Maintenance to Tables and Migrate Away from Excel Downloads PIDX Office Tea to support maintenance of the data tables via current request interface Change output and use API JSON Object Request/Response Ability to call API to retrieve an XLS version of the table data

Automated Data Extracts for PIDX Members

Assist PIDX Members to implement true machine to machine updates for data Push Notifications

Date based data "Give me all records changed since our last extract on Sunday"



Industrial Data eXchange