TECHNOTE

Spring 2022
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HYOLA 410 XX

TruFlex® Technology enabling the ultimate in Glyphosate-based Weed Control

HYBRID AGRONOMIC ATTRIBUTES

Herbicide Tolerance

TruFlex® Tolerant Early to Mid Maturing Hybrid

Plant Vigour

Observed visual ratings from Pacific Seeds Research & Technical Development Trials

8.0 to 8.5

Blackleg Rating

Official Industry Bare Seed Rating of "MR"

Blackleg Groups

Official Industry Screened Triple Blackleg Protection Groups:

ABD

Growing Zones

LRZ-MRZ
Low to Medium-High Rainfall Zones

Yield Adaptability

1.0t/ha to 2.5t/ha

Plant Height

Medium with good Lodging Resistance

***Shatter Tolerance & #Hectolitre Weight**

*Observed visual rating compared to other Hyola Hybrids = 7/10

#Calculated weight rating in Pacific Seeds Trials, normal range = 63 to 67 kg/HL.

Oil Potential

Very High Grain Oil % Content

Industry Planting Alternative to:

44Y30,
44Y27,
InVigor R 4022P,
InVigor R 4520P,
Emu TF,
Raptor TF,
DG Bindo TF,
DG Lofty TF

Pacific Seeds
Growing possibilities

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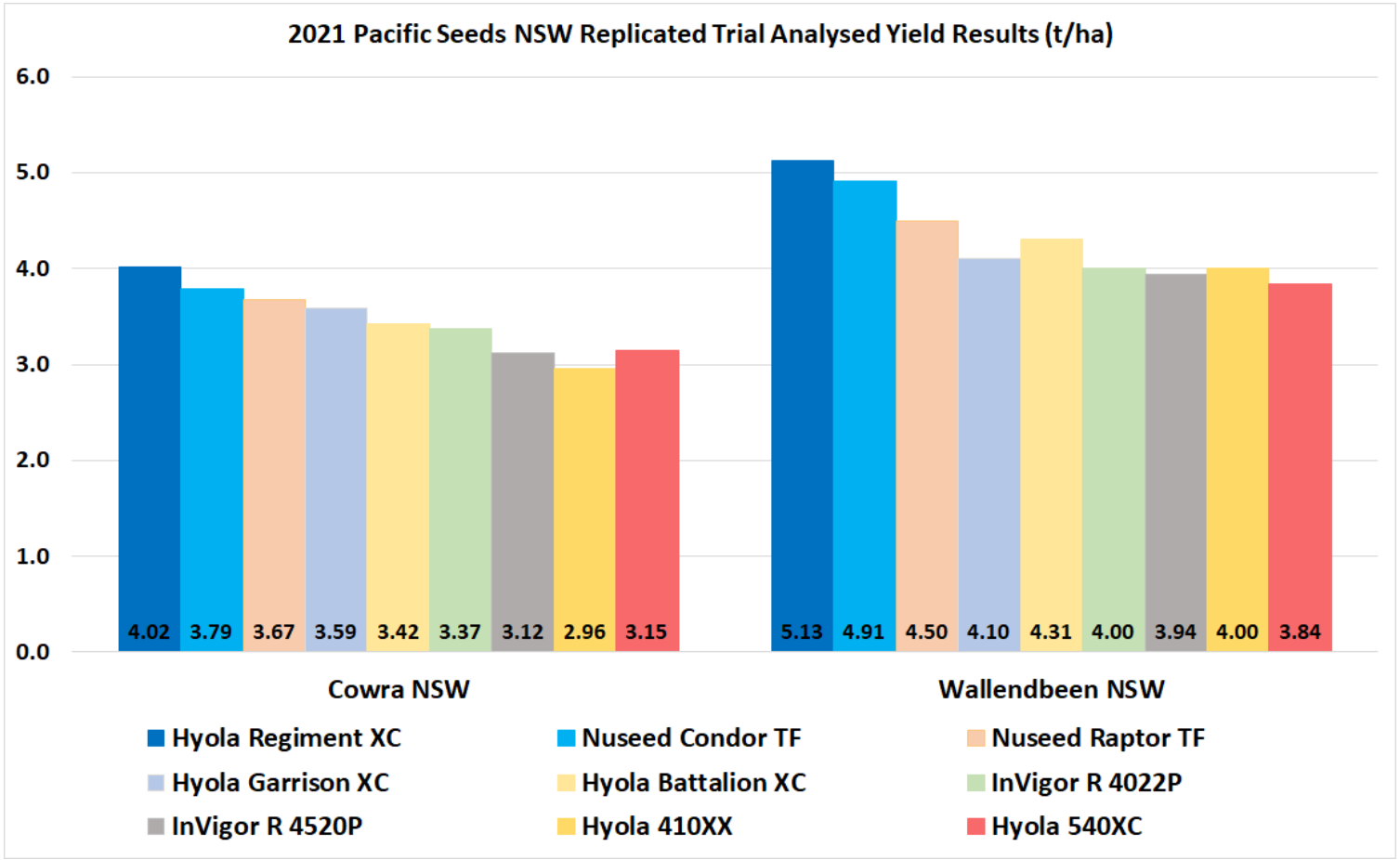
CANOLA

TruFlex CANOLA with Roundup Ready® Technology

HYOLA 410 XX

DELIVERING COMPETITIVE YIELDS IN LRZ-MRZ ZONES TO NSW GROWERS



Wallendbeen NSW Analysis Summary
CV: 6.875
LSD: 0.343
Mean: 4.009

Cowra NSW Analysis Summary
CV: 4.970
LSD: 0.269
Mean: 3.356

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CANOLA

TruFlex CANOLA

HYOLA 410 XX

NSW LONG TERM 2017 - 2021 GRDC NVT LRZ - MRZ GLY RESULTS

Grain Yield Color Key:

High to very High Yielding Performance = Consistent Light Green to Darker Green Colors across Locations and Years
Moderate to High yielding Performance = Consistent Yellow to Light Green Colors across Locations and Years
Lower to Moderate Yielding Performance = Consistent Dark Brown to Lighter Brown Colors across Locations and Years

Long Term Results Early GLY 2017-2021 Variety	Year Mean Yield # Trials	2017 0.44 t/ha 2	2018 0.56 t/ha 1	2019 1.36 t/ha 1	2020 2.71 t/ha 3	2021 3.13 t/ha 3
Nuseed Raptor TF	6				110	108
Hyola Regiment XC	3					107
InVigor R 4520P	7			97	108	105
Hyola Garrison XC	4			97	108	
InVigor R 4022P	7			99	104	103
Pioneer 44Y27 (RR)	9	121		105	101	104
Hyola 410XX	7			98	101	98
Hyola Battalion XC	6				97	98
InVigor R 3520	10	110	97	94	92	96
Nuseed Emu TF	6				88	99
Pioneer 44Y30 RR	3					106
DG 408RR	4	113	110	104		
DG Lofty TF	3					96

Long Term Results Early GLY 2017-2021 Variety	Yield Group Mean Yield # Trials	0.5 0.14 t/ha 1	1 0.66 t/ha 2	1.5 1.36 t/ha 1	2.5 2.16 t/ha 1	3 2.92 t/ha 3	3.5 3.20 t/ha 1	4 3.57 t/ha 1
Nuseed Raptor TF	6				121	110	100	107
Hyola Regiment XC	3					109		106
Hyola Garrison XC	4			97	105	108	100	
Pioneer 44Y30 RR	3					106		107
InVigor R 4520P	7			97	126	104	100	108
Hyola 410XX	7			98	91	102	100	95
InVigor R 4022P	7			99	113	101	100	104
Pioneer 44Y27 (RR)	9	119	118	105	107	100	102	105
Hyola Battalion XC	6				98	98	97	98
DG Lofty TF	3					93		97
InVigor R 3520	10	105	105	94	103	91	94	98
Nuseed Emu TF	6				92	89	100	101
DG 408RR	4	111	112	104				

Data Source: 2022 Grains Research and Development Corporation – Please refer to the NVT website for further information.

Long Term Early GLY NVT 2017 - 2021 Trial Results: N/W, & S/W NSW Growing Environments

The Multi Environment Trial (MET) analysis produces the most accurate and reliable indicator of future variety performance.
MET analysis results are presented at an individual trial level but combine the robustness of a much larger dataset than the SSA.
The MET analysis is conducted on a five-year dataset that includes trials from a wide range of seasonal and environmental conditions.
The analysis can be conducted on more than 660 plots per variety (as opposed to 3 plots/variety in the SSA) to gain an accurate and reliable result.
This enables growers to select consistently high performing varieties.
The MET analysis cannot be conducted until all trials in a trial series have been harvested. The MET results are published 30 days following harvest of the final trial.

GRDC Grains Research & Development Corporation

GRDC National Variety Trials

Pacific Seeds
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TruFlex with Roundup Ready CANOLA Technology

HYOLA 410 XX

S/E NSW SINGLE SITE GRDC NVT TT ANALYSED YIELD RESULTS

Grain Yield Color Key:

High to very High Yielding Performance = Consistent Light Green to Darker Green Colors across Locations and Years
Moderate to High yielding Performance = Consistent Yellow to Light Green Colors across Locations and Years
Lower to Moderate Yielding Performance = Consistent Dark Brown to Lighter Brown Colors across Locations and Years

State Region Locality Crop Type Trial ID Variety Name	NSW S/E Cootamundra Canola CHGA19COOT2 tonnes/ha	NSW S/E Cootamundra Canola CHGA20COOT2 tonnes/ha	NSW S/E Cootamundra Canola CHGA21COOT2 tonnes/ha	NSW S/E Wagga Wagga Canola CHGA20WARI2 tonnes/ha	NSW S/E Wagga Wagga Canola CHGA21WARI2 tonnes/ha	NSW S/E Grenfell Canola CHGA20GREN2 tonnes/ha	NSW S/E Grenfell Canola CHGA21GREN2 tonnes/ha
Hyola Regiment CL	-	-	4.12	-	4.43	-	2.87
Hyola 410XX	1.44	3.84	-	2.83	-	2.94	-
Hyola 540XC	1.30	3.29	-	2.95	-	2.52	-
Hyola Garrison XC	1.51	4.04	3.48	3.24	4.05	3.04	2.66
Hyola Battalion XC	-	-	-	3.18	-	-	-
InVigor R 4022P	1.58	3.76	3.44	3.07	4.29	3.26	3.07
InVigor R 4520P	1.74	4.46	3.90	3.43	4.50	3.52	3.32
InVigor R 5520P	1.38	3.93	3.44	3.17	4.01	2.99	2.90
Nuseed Condor TF	1.71	4.25	3.92	3.24	4.72	3.66	3.31
Nuseed Emu TF	-	-	-	2.54	-	3.28	-
Nuseed GT-53	1.46	4.20	-	3.20	-	3.47	-
Nuseed Raptor TF	1.77	-	4.21	3.24	4.54	3.55	3.02
Pioneer 43Y29 RR	-	3.84	-	3.24	-	3.52	-
Pioneer 44Y27 (RR)	1.49	-	-	2.66	-	3.45	-
Pioneer 44Y30 RR	-	4.07	3.72	3.09	4.10	-	3.10
Pioneer 45Y28 RR	-	4.30	3.64	3.42	4.29	-	3.19
VICTORY V5003RR	1.07	3.47	2.71	2.84	3.10	2.81	2.52
VICTORY V55-04TF	-	-	3.15	-	3.90	-	2.84
Site Mean (t/ha)	1.51	3.86	3.61	3.02	4.23	3.21	2.96
CV (%)	4.95	3.80	7.28	5.24	5.20	6.15	5.78
Probability	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
LSD (t/ha)	0.12	0.24	0.42	0.27	0.35	0.32	0.28
AnalysisDate	28-Nov-2019	24-Nov-2020	08-Dec-2021	25-Nov-2020	08-Dec-2021	17-Nov-2020	08-Dec-2021
Sowing Date	29-Apr-2019	17-Apr-2020	23-Apr-2021	17-Apr-2020	21-Apr-2021	21-Apr-2020	20-Apr-2021

Single Site Trial Results: 2022 Grains Research and Development Corporation – 2019, 2020 & 2021 National Variety GLY Trials. Please refer to the NVT website for further information.
The results of the Single Site Analyses (SSA) are available quickly after harvest (about 14 days) to provide growers a descriptive representation of what happened in the environmental conditions ONLY at that trial.
The SSA is conducted on a single trial at a single location in a single season. These results are derived from three variety replicates, tested in one environment, in one year.
The SSA is less accurate and less reliable than the Multi Environment Trial at predicting long term variety performance for a location and should only be considered in context of the season experienced.
The weakness of the SSA is that it has a low reliability to be able to repeat its results. For example, if the environmental conditions changed so would the variety rankings.
Analysed trial yields in tonnes/ha and expressed as % of Trial Mean Yield. Always use LSD values to compare selected varieties in Single sites to determine if any signifciant differences between them

GRDC Grains Research & Development Corporation
GRDC National Variety Trials

Pacific Seeds
Growing possibilities

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CANOLA

HYOLA 410 XX

S/E NSW SINGLE SITE GRDC NVT GLY ANALYSED YIELD RESULTS

Grain Yield Color Key:

High to very High Yielding Performance = Consistent Light Green to Darker Green Colors across Locations and Years
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State Region Locality Crop Type Trial ID Variety Name	NSW S/E Gerogery Canola CHGA19GERO2 tonnes/ha	NSW S/E Gerogery Canola CHGA20GERO2 tonnes/ha	NSW S/E Gerogery Canola CHGA21GERO2 tonnes/ha	NSW S/E Temora Canola CHGA20TEMO2 tonnes/ha	NSW S/E Temora Canola CHGA21TEMO2 tonnes/ha
Hyola Regiment CL	-	-	3.89	-	3.40
Hyola 410XX	2.00	2.39	-	3.35	-
Hyola 540XC	1.43	2.47	-	3.00	-
Hyola Garrison XC	1.94	2.35	3.65	3.43	3.23
Hyola Battalion XC	-	-	-	3.53	-
InVigor R 4022P	2.22	3.73	3.41	3.28	2.93
InVigor R 4520P	2.38	3.79	3.41	3.24	3.15
InVigor R 5520P	2.01	3.65	3.33	3.28	2.96
Nuseed Condor TF	2.36	3.00	3.68	3.95	3.40
Nuseed Emu TF	-	-	-	2.48	-
Nuseed GT-53	1.79	2.54	-	3.26	-
Nuseed Raptor TF	1.96	-	3.71	3.91	3.08
Pioneer 43Y29 RR	-	3.40	-	3.29	-
Pioneer 44Y27 (RR)	2.12	-	-	2.78	-
Pioneer 44Y30 RR	-	3.59	3.58	-	3.11
Pioneer 45Y28 RR	-	3.16	3.35	-	3.29
VICTORY V5003RR	1.45	2.13	2.81	3.05	2.93
VICTORY V55-04TF	-	-	3.00	-	3.40
Site Mean (t/ha)	1.97	3.14	3.43	3.20	3.10
CV (%)	5.26	5.94	7.09	8.31	4.05
Probability	<0.001	<0.001	<0.001	<0.001	<0.001
LSD (t/ha)	0.17	0.30	0.39	0.43	0.21
AnalysisDate	29-Nov-2019	04-Dec-2020	08-Dec-2021	20-Nov-2020	08-Dec-2021
Sowing Date	04-May-2019	27-Apr-2020	30-Apr-2021	21-Apr-2020	07-May-2021

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GRDC GRAINS RESEARCH & DEVELOPMENT CORPORATION
GRDC NATIONAL VARIETY TRIALS

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TruFlex CANOLA

HYOLA 410 XX

S/W NSW SINGLE SITE GRDC NVT GLY ANALYSED YIELD RESULTS

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State	NSW	NSW	NSW	NSW	NSW	NSW
Region	S/W	S/W	S/W	S/W	S/W	S/W
Locality	Oaklands	Oaklands	Beckom	Beckom	Lockhart	Lockhart
Crop Type	Canola	Canola	Canola	Canola	Canola	Canola
Trial ID	CLGA20OAKL2	CLGA21OAKL2	CHGA20BECK2	CHGA21BECK2	CHGA20LOCK2	CHGA21LOCK2
Variety Name	tonnes/ha	tonnes/ha	tonnes/ha	tonnes/ha	tonnes/ha	tonnes/ha
Hyola Regiment CL	-	3.70	-	3.47	-	3.11
DG Bindo TF	-	-	-	3.05	-	3.00
DG Lofty TF	-	3.39	-	3.22	-	2.51
Hyola 410XX	3.08	3.38	2.55	3.14	3.53	2.47
Hyola 540XC	-	-	2.59	-	3.37	-
Hyola Garrison XC	2.88	-	2.72	3.19	3.51	2.80
Hyola Battalion XC	2.96	3.40	2.85	3.39	3.48	3.00
InVigor R 3520	2.68	3.13	-	-	-	-
InVigor R 4022P	3.18	3.68	3.02	3.39	3.38	2.57
InVigor R 4520P	3.38	4.00	2.89	3.50	3.70	2.60
InVigor R 5520P	-	-	2.63	-	3.30	-
Nuseed Condor TF	-	-	2.95	-	3.50	-
Nuseed Emu TF	2.99	3.68	2.44	3.38	2.86	2.39
Nuseed GT-53	-	-	2.49	-	3.16	-
Nuseed Raptor TF	3.30	3.74	2.93	3.30	3.59	2.90
Pioneer 43Y29 RR	3.11	-	2.87	-	3.88	-
Pioneer 44Y27 (RR)	3.42	3.96	2.58	3.43	3.54	2.05
Pioneer 44Y30 RR	-	3.68	-	3.45	-	2.72
VICTORY V5003RR	-	-	2.48	2.80	3.04	3.16
VICTORY V55-04TF	-	-	-	2.93	-	3.12
Site Mean (t/ha)	3.18	3.67	2.75	3.27	3.43	2.72
CV (%)	3.48	4.29	6.91	4.55	4.74	5.85
Probability	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
LSD (t/ha)	0.184277049	0.256962976	0.31	0.24	0.26	0.27
AnalysisDate	20-Nov-2020	30-Nov-2021	13-Nov-2020	25-Nov-2021	17-Nov-2020	30-Nov-2021
Sowing Date	22-Apr-2020	27-Apr-2021	24-Apr-2020	05-May-2021	23-Apr-2020	12-May-2021

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TruFlex CANOLA

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N/W & S/W NSW SINGLE SITE GRDC NVT GLY ANALYSED YIELD RESULTS

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State Region Locality Crop Type Trial ID Variety Name	NSW N/W Parkes Canola CHGA20PARK2 tonnes/ha	NSW N/W Trangie Canola CLGA20TRAN2 tonnes/ha	NSW N/W Trangie Canola CLGA21TRAN2 tonnes/ha	NSW S/W Condobolin Canola CLGA20CONA2 tonnes/ha
Hyola Regiment CL	-	-	3.21	-
DG Bindo TF	-	-	-	-
DG Lofty TF	-	-	2.58	-
Hyola 410XX	2.41	1.91	2.69	3.26
Hyola 540XC	2.37	-	-	-
Hyola Garrison XC	2.59	2.02	-	3.33
Hyola Battalion XC	2.33	2.34	2.71	3.09
InVigor R 3520	-	1.98	2.69	1.91
InVigor R 4022P	2.83	2.69	2.91	3.08
InVigor R 4520P	3.15	2.71	3.19	3.21
InVigor R 5520P	-	-	-	-
Nuseed Condor TF	2.96	-	-	-
Nuseed Emu TF	2.22	2.12	3.08	2.04
Nuseed GT-53	2.94	-	-	-
Nuseed Raptor TF	2.71	2.53	3.04	3.41
Pioneer 43Y29 RR	2.92	2.37	-	3.38
Pioneer 44Y27 (RR)	2.89	2.34	3.00	2.97
Pioneer 44Y30 RR	-	-	2.83	-
VICTORY V5003RR	-	-	-	-
VICTORY V55-04TF	-	-	-	-
Site Mean (t/ha)	2.76	2.25	2.94	2.93
CV (%)	5.14	8.57	4.75	7.72
Probability	<0.001	<0.001	<0.001	<0.001
LSD (t/ha)	0.23	0.31	0.23	0.38
AnalysisDate	17-Nov-2020	13-Nov-2020	19-Nov-2021	05-Nov-2020

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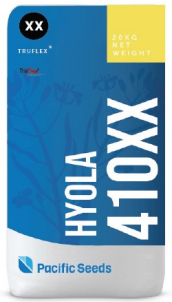
HYOLA 410XX

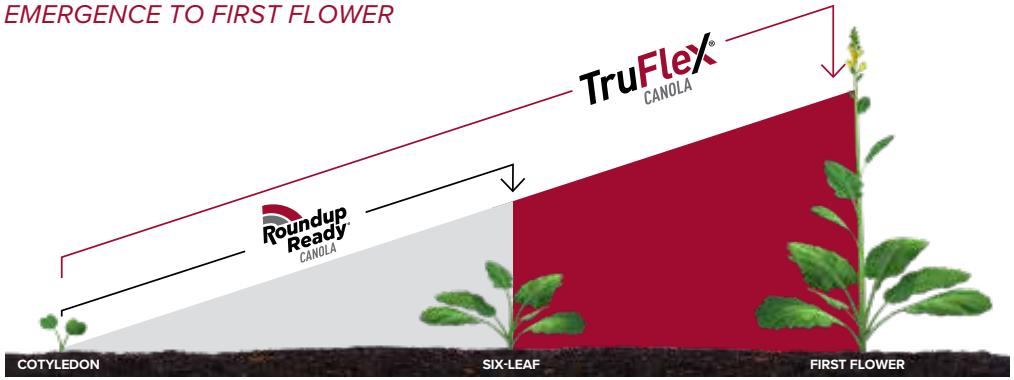
Delivering Flexible Solution Driven Profits to Canola Growers
More Flexibility & Options than Roundup Ready (RR) Hybrids



THE RATE FARMERS NEED FOR THEIR WEED CHALLENGES

PRODUCT	ACTIVE INGREDIENT	Roundup Ready CANOLA	TruFlex CANOLA	TruFlex CANOLA
Roundup READY HERBICIDE with PLANTSHIELD	690 g/kg glyphosate (granule)	2 apps @ 0.9 kg/ha	2 apps @ 1.3 kg/ha	3 apps @ 0.9 kg/ha
Roundup READY PL HERBICIDE with PLANTSHIELD	540 g/L glyphosate (liquid)	2 apps @ 1.15 L/ha	2 apps @ 1.67 L/ha	3 apps @ 1.15 L/ha

TRUFLEX CANOLA EXTENDED SPRAY WINDOW –
EMERGENCE TO FIRST FLOWER



When applying Roundup Ready Herbicides at registered rates

The window of application for Roundup Ready Herbicides extends past the six-leaf stage all the way to first flower.

Pacific Seeds
Growing possibilities