Ticket #	Category	Method	Question raised to	Question	Raised by	Response From
1	Glass Cold End Coating	email	FPLMA	If glass surface average dyne value is 36 and paper requires min 38, have the paper suppliers looked at which adhesives will perform on 36 dyne surfaces?	Lisa Parker	FPLMA
2	Facestock	email	FPLMA	Why isn't pre-grained face stock commonly used by printers anymore and what is the cost difference between pre-grained and ungrained facestock?	Andrew McPherson	FPLMA
3	Facestock	email	FPLMA	Is there a more definitive measure for determining the suitability of a specific face stock for wine labels such as the bendability test and is it feasible to do this testing in Australia?	Andrew McPherson	FPLMA
4	Liner	email	FPLMA	PET suffers issues relating to static and is thermally reactive in as much as when the ambient temperature is warm the PET becomes soft and is subject to stretching. The upside of PET is that it does not suffer web tear – what is the panel's recommendations in regard to the use of PET and glassine backing paper?	Andrew McPherson	FPLMA
5	Label Storage	email	FPLMA	What is the panel's recommendation in terms of environmental conditions for label storage and application in a bottling hall?	David Hutton	FPLMA
6	Facestock	email	FPLMA	What face stocks and adhesives have been specifically developed for wine labels?	Andrew McPherson	FPLMA
7	Adhesive	email	FPLMA	Are there more aggressive adhesives that could be used and what is the cost differential to the adhesives currently being used?	Andrew McPherson	FPLMA
8	Application Pressure	email	FPLMA	What is the minimum recommended application pressure for facestock/adhesive combinations for body, medal and neck labels by facestock/adhesive combination?	Andrew McPherson	FPLMA
9	Label Storage	email	FPLMA	What is the recommended shelf life for labels and especially neck labels and can a use by date be printed onto the label core?	Andrew McPherson	FPLMA

10	Label Storage	email	FPLMA	What conditions should labels be stored in- temperature? Any humidity constraints?	David Hutton	FPLMA
11	Label Storage	email	FPLMA	What is the perfect temperature for a label to be at when applied to the bottle	David Hutton	FPLMA
12	Industry Tests	email	FPLMA	Can the FPLMA (printers & paper suppliers) provide a recommendation to the WPA on which of the WPA tests they believe should be used?	Andrew McPherson	FPLMA
13	Industry Tests	email	FPLMA	Can the FPLMA provide a recommendation as to the best measures to use to assess if a material is suitable for neck labels?	Andrew McPherson	FPLMA
14	Label Trials	email	FPLMA	What responsibility do material suppliers have when introducing a new material to the market?	Andrew McPherson	FPLMA
15	Adhesive	sms txt	FPLMA	Are label adhesion issues being addressed in other industries or is this a unique challenge for the wine industry with larger label sizes and more embellished labels?		FPLMA
16	Label Storage	sms txt	FPLMA	Given the requirement for labels to condition to ambient temperature how does the industry address the delivery of labels at the time of converting onto a bottle and if the label presents issue during application who takes responsibility?		FPLMA
17	Adhesive	sms txt	FPLMA	What change in the industry in 2014 as labels started to lift/fall off did cheaper glues/paper stocks hit the market due margin tightening?		FPLMA
18	Facestock	sms txt	FPLMA	There are clear PS labels used in the beer and beverage industries which are typically applied to wet small diameter bottles at high speeds without adhesion issues. What is the key difference for wine bottles?		FPLMA
19	Label Trials	sms txt	FPLMA	What addition work/testing is the label suppliers doing to ensure that labels do not lift over time?		FPLMA
20	Label Storage	sms txt	FPLMA	What acclimitisation time do you recommend for labels before use? Does air freight affect performance of labels or perhaps require more acclimitisation time?		FPLMA
21	Facestock	email	FPLMA	I've recently been introduced to pewter labels. How do these compare to paper in terms of issues with adhesion/application to bottle?	Damian Hamilton	FPLMA
22	Adhesive	email	FPLMA	What premium adhesives for Uncoated paper do you recommend and why?	Don Bruce	FPLMA
23	Label Storage	email	FPLMA	If a label is stored in severe conditions will it revert to its former quality after conditioning in standard conditions?	Don Bruce	FPLMA

24	Adhesive	email	FPLMA	What is dwell time?	Don Bruce	FPLMA
25	Application Pressure	email	FPLMA	What dwell time is recommended and at what pressure? How is this achievable on high speed lines?	Paul Grafton	FPLMA
26	Facestock	email	FPLMA	Do ultrasonic sensors work on all paper stocks? (ie glassine, metallic)	Paul Grafton	FPLMA
27	Adhesive	email	FPLMA	How much more are the alternative adhesives you mentioned? (ie x2 or 2%) do these work on lower dyne levels?	Paul Grafton	FPLMA
28	Adhesive	sms txt	FPLMA	Are label adhesion issues being addressed in other industries or is this a unique challenge for the wine industry with larger label sizes and more embellished labels? Matt WISA		FPLMA
29	Glass Quality Controls	email	Glass	I understand that the dsg has limitations as to its feedback and that other technologies may be available that may be better. Do either of the companies have intentions to use other measurement technologies	Richard McCaughey	Brian Langley/Justin Becker
30	Glass Cold End Coating	email	Glass	Is the formulation/analysis of the cold end coating common throughout the glass manufacturing world or does it vary from country of manufacture to country of manufacture. For example is the formulation for the cold end coating different for glass manufactured in the U.S. to glass manufactured in Europe to glass manufactured in the Middle East to glass manufactured in Asia to glass manufactured in Australia?	Andrew McPherson	Brian Langley/Justin Becker
31	Glass Quality Controls	email	Glass	Does the DSG equipment measure the total surface variation in the vertical and horizontal planes and if so is it measured as an absolute variation?	Aaron Haw	Brian Langley/Justin Becker
32	Adhesive	email	Glass	What consultative process has happened between glass and paper suppliers in regard to the adhesives that they are using and their compatibility to the cold end coating currently being used?	Andrew McPherson	Brian Langley/Justin Becker
33	Adhesive	email	Glass	Dyne levels on bottles vs dyne levels for adhesives - are they compatible and what consultive process has been undertaken with paper/adhesive manufacturers?	Andrew McPherson	Brian Langley/Justin Becker
34	Glass Cold End Coating	email	Glass	Dyne level = 36 +/- 2. Reduced coating weight = higher dyne. If higher coating weight is used does dyne reduce?	Adrian Van Drunen	Brian Langley
35	Glass Quality Controls	email	Glass	We have seen adhesion problems with imported glass with acceptable results on local glass using same batch of labels. Have you been able to analyse these bottle coatings	Adrian Van Drunen	Brian Langley/Justin Becker

36	Glass Cold End Coating	email	Glass	Does temperature and humidity have an effect on the integrity of the cold end coating and if so what are the temperature and humidity level at which this could occur?	Andrew McPherson	Brian Langley/Justin Becker
37	Glass Cold End Coating	email	Glass	Has the formulation of the cold end coating been reformulated to suit pressure sensitive adhesives?	Andrew McPherson	Brian Langley/Justin Becker
39	Glass Quality Controls	email	Glass	Is each overseas production run of a SKU of glass sold in Australia by OI and Orora covered by an OI or Orora Certificate of Compliance, does the certificate include sample sizes and AQLs for each fault category and is the audit done by OI or Orora auditors?	Andrew McPherson	Brian Langley/Justin Becker
40	Glass Trials	email	Glass	What environmental conditions are recommended by OI and Orora for best application?	Andrew McPherson	Brian Langley/Justin Becker
41	Glass Identification	email	Glass	Is all glass imported by OI and Orora laser etched for traceability or is inkjet used on occasion?	Andrew McPherson	Brian Langley/Justin Becker
43	Glass Quality Controls	email	Glass	Does bottle lean impact on the measurement of sink and bulge by the DSG?	Paul Grafton	Brian Langley/Justin Becker
44	Glass Cold End Coating	email	Glass	If hot end coating is poorly applied or bonded, will this impact on how well the cold end coating bonds to the glass surface? Is it possible for the cold end coating to detach during label application and would this contribute to label bubbling?	Paul Grafton	Brian Langley/Justin Becker
45	Glass Cold End Coating	email	Glass	Has the formation of duracoat changed over the years? Have you approached the makers of duracoat about modifying the dyne of the coating?	Paul Grafton	Brian Langley/Justin Becker
46	Glass Quality Controls	email	Glass	What global benchmarking has been done of all processes and standards?	Andrew Jones	Brian Langley/Justin Becker
47	Glass Trials	email	Glass	What is the possibility for consistent supply of bottles with a Dyne of 38 or higher?	Peter Holywell	Brian Langley/Justin Becker
48	Glass Quality Controls	email	Glass	What is the industry standard to ensure out of Spec bottles are not used?	Peter Holywell	Brian Langley/Justin Becker
49	Glass Trials	email	Glass	Is there any testing done on imported bottles prior to use?	Peter Holywell	Brian Langley/Justin Becker
50	Glass Quality Controls	sms txt	Glass	What percentage of glass is being rejected before despatch? How much glass not meeting the sink and bulge standards are being missed and reaching customers? What measurable improvements in this has been achieved since last Forum?		Brian Langley/Justin Becker
51	Glass Cold End Coating	sms txt	Glass	Why does flint glass seem to behave differently to coloured glass in regards to surface cold end coating?		Brian Langley/Justin Becker
52	Glass Cold End Coating	sms txt	Glass	2 year shelf life of durocote is this also the case when applied to bottles?		Brian Langley/Justin Becker
53	Glass Quality Controls	email	Glass	Dyne levels at this current time is 36 through your manufacturing sites are these dynes checked and recorded with each batch made ?	Steve Brooks	Brian Langley/Justin Becker

54	Glass Cold End Coating	email	Glass	What is the minimum dyne level on the bottles that are sent to your customers?	Steve Brooks	Brian Langley/Justin Becker
55	Glass Cold End Coating	sms txt	Glass	Is the cold end coating on imported glass the same as on Australian glass?		Brian Langley/Justin Becker
56	Label Application	email	Wine Packager	What industry standard controls are in place to ensure labels are applied within the performance window (temp/humidity) suitable for the adhesive?	Peter Holywell	Paul Grafton
57	Label Application	email	Wine Packager	What is the industry standard for application pressure? Are these recorded at the time of application?	Peter Holywell	Paul Grafton
58	Label Application	email	Wine Packager	Is there a relationship between application speed and application pressure?	Peter Holywell	Paul Grafton
59	Label Application	email	Wine Packager	Does a customer normally send you their final design and label specs for new products?Do they check a new label will fit within the label panel requirements of the bottle?	Tracy Coad	Jamie Roehr
60	Industry Tests	sms txt	Wine Packager	When doing spray test, do we need to inspect the adhesive contact on edges of labels before spraying water? I observe "fish teeth" look adhesive contact on label edges and there might be correlation between this kind of adhesive contact and darting?	Leo Jin	Jamie Roehr
61	Glass Cold End Coating	sms txt	Wine Packager	Is the coefficient of friction for the cold end treatment tested on a batch level and does this impact the ability for labels to be applied?		WPA
62	Label Application	sms txt	Wine Packager	How often are the consumables on the line like rollers and wipers etc replaced?		Paul Grafton
63	Label Application	sms txt	Wine Packager	What are the options for customers that do want to go outside of WPA guidelines? How can WPA members support those customers to support innovation in label design?		Jamie Roehr
64	Facestock	email	Wine Packager	Vinpac Issue in 2012 and again 2016. Varnish helped, were you able to confirm Cobb of good & bad.	Adrian Van Drunen	Jamie Roehr
65	Label Trials	email	WPA	Is there an opportunity to include an update to WPA specs to enable use of 83gsm metallic paper for neck labels	Peter Holywell	Jamie Roehr
66	Miscellaneous	email	WPA	Labels are typically designed with a combination of Grain, Emboss, Silkscreen and Foil. Are the Glass, Application and Environmental processes / conditions standardized, or adjusted in consideration of the label design. What are the packaging result or packaging cost implications to be considered	Peter Holywell	WPA
67		email	WPA	What communication do WPA members have with customers before accepting a label design to be bottled	Peter Holywell	WPA

68	Label Embellishments	email	WPA	What is our Joint Message to the customer for fully embellished labels?	Peter Holywell	WPA
69	Miscellaneous	email	WPA	As an industry, do we understand why Global material and design specifications fail in the Australian region	Peter Holywell	WPA
70	Label Specification	email	WPA	The website looks fantastic. We know from experience that labels larger than WPA guide can be successfully applied by manipulating paper stock selection. In future do you think that there will be scope to add paper weight as another variable so as to have less restrictive size charts.?	Lisa Parker	Glass/WPA
71	Label Application	email	WPA	Has any data been captured on what oversized labels are successful and which fail?	Lisa Parker	WPA
72	Application Pressure	sms txt	WPA	Do you know how much it will cost for the Tekscan to be added to Z wipe?	Leo Jin	Paul Grafton
73	Application Pressure	sms txt	WPA	Regarding Tekscan is the measure of the pressure force is for the entire label? And is the force a constant for the entire label?	Leo Jin	Paul Grafton
74	Label Trials	sms txt	WPA	What's the plan to support pressure sensitive testing outside of the WPA members?		Paul Grafton
75	Adhesive	sms txt	WPA	Given a tested 34kpa minimum label application force what pressures do the label manufacturers quote is the minimum?		Paul Grafton
76	Label Application	email	WPA	Is it common practice to adjust applicator setup according to the label material? Will you use the Tekscan results to better understand pressure / setup for different material types?	Matthew van Eck	Paul Grafton
77	Application Pressure	email	WPA	Your findings with Tekscan suggest below 34, if pressure was 5 this may not be adequate. Is there a lower limit that can be stated?	Adrian Van Drunen	Paul Grafton
78	Application Pressure	email	WPA	Is there a WPA recommendation on the type of application material to use (e.g. Z wipes?)	Andrew Jones	Paul Grafton
79	Miscellaneous	sms txt	Designer	Do you have an example project designing a new label that you can share with us		Cherise Conrick
81	Label Application	sms txt	WPA	Regarding Tekscan is the measure of the pressure force is for the entire label? And is the force a constant for the entire label?		Paul Grafton

Response	
Wine label adhesives are engineered to perform above a minimum of 36 dyne, and perform best at 38 dyne. The FPLMA recommends that the industry works to ensure that a minimum of 36 Dyne level is always achieved proir to adhesion, and that a target of 38 Dyne for bottles is worked towards. Especially as paper stiffness, graining and embellishment will affect adhesive wet out, therefore a higher surface energy will result in a superior bond formation.	This was raised at the Forum and forms part of the audio presentation on our website
There are a wide range of pre-grained material options now available for use. Some of these materials are readily available within Australia and others are available to be supplied by airfreight with approxiamately 4 weeks lead times. There are several reasons for mechanically graining of stocks during printing, rather than using pre-grained stocks. Firstly, due to cost - generally pre-grained stocks are a higher cost due to the smaller manufacturing volumes. Secondly, due to supply chain - industry volume requirements constantly change so the wider range of materials available creates a higher risk of lack of supply. Thirdly, design flexibility - marketing and design requirements for wine labels are for grain effects that are unique to the wine brand.	
The current 135gsm maximum guideline measure has proved very effective and is an excellent guide for use - subect to design and embellishment. The FPLMA recommends continuing with this guideline. All label designs produced with material above this guideline should be evaluated by the customer and bottling hall on a case by case basis, with the customer and bottling hall deciding on use, dependant on bottling hall capabilities and the customers wishes.	
PET Liner has proven to reduce downtime on application lines and gives a wider operational tolerance. The FPLMA recommends all bottling lines have as a standard the best technology to eliminate static and be able to run PET liner. Glassine liner is an accepatable alternative but has a tighter operational tolerance, especially for high speed application.	
Label storage should be 23 degrees C +/- 2 degrees, 50% RH +/-5 . The labels should be conditioned in the bottling hall for at least 8 hours prior to application to ensure moisture balance with room environment.	
All material suppliers to the wine industry have a wide range of wine label products, specifically designed for wine label application. A comprehensive list is available for review if required.	
More aggressive adhesives can be designed to be applied to wine label material, this would increase label costs by between 20-50%. The adhesives currently used on wine label material have been specifically designed for wine label appliaction.	
Variations in application process, bottle, environmental conditions and label design all impact on application pressure required. As a general rule, applying as much pressure as the squeegee can apply without distorting the label or moving the bottle is recommended. Even pressure also needs to be applied across the entire label to ensure full adhesion. It should be noted that both application line speed and pressure have a direct correlation in adhesion performance.	
Shelf life recommendations from material manufacturer's will vary depending on the material construction used, and can be anywhere between 1-2 years from material manufacture. Recommendations for each material are on the Technical data sheets. A date that the material is converted to labels is usually supplied on the finished labels, this is the best first indicator of material age. Full traceability of material age is possible through convertor and material manufacturing records.	

Label storage recommendations vary depending on the material construction, and is supplied on data sheets. The general storage recommendation is 23 degrees C +/- 2 degrees, 50% RH +/-5 . Large variations in temperature and humidity can shorten the shelf life of label material, as can unfavourable storage conditions.	
The optimum application environment is 23 degrees C +/- 2, 50%RH +/- 5 with the bottle surface at 23 Degrees C +/-2.	
The critical industry test recommendations are testing methods for Scuff Test, Tape Test and Ice Bucket testing. Introducing a standard Dyne Test of Bottles, along with a focus on controlled application conditions is recommended. Stable storage conditions, both prior and post application are also critical to successful adhesion and should be monitored.	
Neck labels require specific adhesives that display good mandrel performance. Uncoated high grammage papers, removable and respositional adhesives are not recommended for neck labels. The best indicator for suitablity is a mandrel test, and the best test for suitability is an application test. Neck label design based on the current WPA guideline is recommended as a general rule.	
All wine label material is designed for suitability to the wine industry. Material suppliers work closely with converters and end users to thoroughly evaluate material before release to the market.	
Wine labels are generally the most challenging, due to the many variations in design and application. A focus on reducing and controlling application variations would minimise these challenges.	
Materials are designed to withstand some variations in environmental conditions. The major criteria for environmental control is to pre-condition labels at least 8 hours before application.	
Pressure sensitive material suppliers manufacture and recommend materials designed for wine labelling. There has been no significant change to materials, which would impact on these recommendations.	
The major environmental difference is that most bottles pass through high velocity air blowers just prior to label application, hence the bottles are dry. The face material is film (BOPP) ranging between 40-50 microns, therefore memory is very low which reduces the chance of lifting.	
Simulated aged testing is conducted on each wine label product before it is introduced to market. Adhesive performance is measured during manufacture, the initial performance can be compared to aged retain samples from the same run.	
Recent laboratory evaluation studies show no difference could be found between air freighted label stock and normal freighted label stock. It is recommended to condition labels at least 8 hours prior to application to ensure equilibration with room environment.	
The adhesives used should have a higher initial tack and coating weight and be designed for use with Pewter material. Application trials are recommended before use.	This was raised at the Forum and forms part of the audio presentation on our website
Material suppliers recommend using adhesive and facestock combinations designed for the wine label industry.	This was raised at the Forum and forms part of the audio presentation on our website
This is largely dependent on the face stock ie film will distort at high temp and not return to it's former shape. Paper will distort when exposed to high humidity over prelonged periods and will not return to former shape also. Specific adhesives have a service temperature range as per their data sheet and should not be subjected to temperatures outside of this range.	This was raised at the Forum and forms part of the audio presentation on our website

Dwell time is the time taken for a label to be applied to a bottle. It is also a term used to describe the length of time for an adhesive to gain maximum adhesion to the bottle.	This was raised at the Forum and forms part of the audio presentation on our website
Dwell times are regulated by line speed. As a general rule, applying as much pressure as the squeegee can apply without distorting the label or moving the bottle is recommended. Even pressure also needs to be applied across the entire label to ensure full adhesion. Application line speed and pressure have a direct correlation in adhesion performance.	
There are many applicators and sensors available in the industry, it is best to refer to the machine supplier for the options available depending on material being applied and the applicator.	
As a general rule, alternative adhesives would add between 20-40% cost to material. The optimium dyne level is a minumum of 38, the industry should work towards achieving this minimum standard to ensure widest application tolerance.	
Wine labels are generally the most challenging, due to the many variations in design and application. A focus on reducing and controlling application variations would minimise these challenges.	
Sourcing equipment to check glass container dimensionally is important to both glass businesses. There are some fantastic tools in the market to conduct different tests, however the speed in which they do these test is extremely slow and not viable for our businesses.	
This was raised at the Forum. Please see note at end of spreadsheet As discussed at the forum there are various cold end coatings available, with polyethylene the world standard for premium bottles. There are different manufacturers of polyethylene coatings who use their own proprietary formulations. Durocote has been the best performing product to date to protect the glass surface from damage.	This was raised at the Forum and forms part of the audio presentation on our website
This was raised at the Forum. Please see note at end of spreadsheet As discussed at the forum, the DSG measures sink and bulge as a deviation from a vertical plane drawn through points at the upper and lower end of the label panel. This plane is constantly adjusted as the DSG takes measurements throughout the 360 degree rotation of the bottle. Horizontal deviation is measured as "out of round".	This was raised at the Forum and forms part of the audio presentation on our website
As discussed at the forum, polyethylene cold end coating has been the industry standard in Australia for 20 years. From this point of view, glass surface energies have remained as a known constant. The glass suppliers have made contact to paper suppliers for invitation to meet and explore improvement opportunities.	
(see ticket 32)	
As discussed at the forum, dynes do not reduce. Correct coating application for appearance and scratch resistance is important.	This was raised at the Forum and forms part of the audio presentation on our website
Each incident is investigated on it's own merits, whether for imported or locally produced glass. As discussed at the forum, their have been known application issues which have caused some issues in the market. These have been identified and rectified as part of the investigation process.	

Ambient temperature and humidity have no effect during application - the temperature is controlled and the coating is applied as a spray, so humidity is already 100%. As discussed at the forum, temperature and humidity will come into play during aplication due to possible condensation on the glass surface and on glue effectiveness. Temperature and humidity will have no direct effect on the glass coating.	
No. The coating has been formulated to protect the glass surface only.	
This question cannot be answered jointly. As discussed at the forum, to date O-I has imported glass from wholly owned or joint venture operations that operate to the same global O-I standards as local operations. O-I Australia has processes to remain involved throughout the manufacturing process ensuring compliance to all requirements, and this same process would be applied to external suppliers if ever required. Orora do have process in place to audit imported products.	
As per specified by label manufacturers (the bottle surface must be dry and within the temperature range recommeneded for the particular label adhesive.). Elimination of glass bottles to the extremes of the environment via glass warehouse storage.	
Both laser and inkjet codes are acceptable formats, unless specific customer requirements dictate one or the other for proprietary bottles.	
Lean (concentricity) and sink/bulge are measured by the DSG independently. Due to the way the DSG measures sink and bulge (see ticket 31) lean has no impact on this measurement.	
Hot end coating cannot be poorly bonded, but can be insufficient (extremely unlikely as this is measured regularly). Cold end coatings applied without the presence of sufficient hot end coating will not bond properly. It is likely that this could cocntribute to labelling issues.	
Sun Chemical is the manufacturer of Duracoat and has been approached, as have other cold end coating manufacturers.	
Please see ticket 39)	This was raised at the Forum and forms part of the audio presentation on our website
O-I Adelaide manufactured bottles are now achieving this result. Orora do not conduct any dyne testing.	
This question is too broad. If in reference to imported bottles see ticket 39.	
See ticket 39.	
The percentage of rejected glass varies greatly between jobs, manufacturing lines and production runs. There has been a significant reduction across the industry for complaints relating to sink and bulge for both Orora and O-I.glass, demonstrating significant improvements in this area.	
As discussed at the Forum, there is no reason why this should be the case. Glass colour has no known or measurable impact on coatings.	
As discussed at the Forum, the shelf life relates to the possible separation of the liquid components of the solution in the drum.All moisture is flashed off during application.	This was raised at the Forum and forms part of the audio presentation on our website
Testing has shown that when parameters for good scratch resistance are met dyne results remain within a tight band. Ongoing dyne testing is not conducted by O-I.	

See ticket 53.	
All imported glass uses polyethylene cold end coating.	
Most production facilities are not temperature and humidity controlled. Most do have air-conditioning for the purpose of employee comfort.	
Prior to the Tekscan there was no direct measurement of the application presssure. Observation of application quality was the only measure.	
We have not done enough trials to verify this but we have observed a higher appication pressure on the high speed line we tested, when compared to the other lines.	This was raised at the Forum and forms part of the audio presentation on our website
Spary testing is carried out during investigation for label bubbling. Label edge lift found post bottling would be investigated through hand applying label to bottles and to plate glass. This would show if the bubling is due to glass finish issue or label/adhesive issue.	
The coefficient of friction (dyne level) for cold end treatment is not directly measured by Orora or O-I on a batch level. Some of the individual contract packagers do test dyne level when thre is an issue with application to determine whether this is a contributing factor. Glass manufacturers indirectly measure the surface coating via various rub tests and slip angle tests conducted during production.	
They are replaced as wear is observed.	This was raised at the Forum and forms part of the audio presentation on our website
The WPA label dimension app SizeMeUp.com.au and Getting Ready for Bottling- pressure sensitive label guidelines are the result of our members' combined knowledge and other industry expertise to produce a successful label application for customers. Each contract packager's automated lines have slightly different tolerance levels. Each member is committed to working with designers and customers to obtain the best result. **think here about the "QA" team we are thinking about putting together to solve packaging issues - could this be rolled out as an innovation team???**	
We could find no cobb value information on the pdf for the 2012 issue. The information contained in many printers' label pdf documents has really improved and now include COBB value. The problem label in 2016 had a COBB value of 5.	
Environmental conditions are not fully controlled in the majority of contract packaging facilities. Humidity being the key uncontrolled factor. Application methods are very similar across faciliteis but this is a starting point and application methods are varied to achieve the best results for the particular situaton.The cost implications include increased set up times for non-standard labels, increased downtime if conditions change (eg bubbling, edge lifting). Slower run rates and double handling of the product may also be countered.	
The course of conversation or discussion regarding labels is in the hands of our customers and their designers. In most cases, the contract packager is not involved with label design. We urge customers/designers to make contact well before the label is printed and before the due bottling date. We can offer guidance and advice. The design of the label is ultimately the customers' choice.	

Labels that have an all-over graining pattern must have a minimum 3mm emboss free zone measured from each label edge to aid adhesion and help prevent label lifting from the glass. In our experience label lifting becomes evident post bottling. This allows ingress of moisture than can exacerbate lifting and bubbling. Fully embossed labels have the potential to cause application issues, reducing the final quality of packaging and potentially increased application costs as referred to in Ticket 66.	
	This was raised at the Forum and forms part of the audio presentation on our website
Whilst larger labels can be applied successfully on some ocasions, facestock/aadhesive combinations are not the only factors that come into play. Other factors include, but are not exclusive to, label embellishments, variations in adhesive coat weight, line speed, application pressure, environmental conditions, dyne levels and quality of bottle surface. In terms of paper weight/type the facestock manufacturers advise that in isolation these are not a definitive measure of application performance. Although the WPA does recommend minimum and maximum for both paper weight and paper thickness, these are guides which provide for the best chance of successful application. The contract packager shoud be contacted direct if a label size is outside of WPA recommended guidelines so that they can assess the label on an individual basis.	
	This was raised at the Forum and forms
Enquiries are being made to Tekscan for a custom Zwipe. The non custom sensors are around $250 each.	
Pressure is measured for each individual sensel. The number of sensels per sensor ranges from 100 to 1000's depending on the sensor used.	This was raised at the Forum and forms part of the audio presentation on our website
The case study is being funded by the members of WPA, and there is no current plan to test outside of that membership. If you are interested in conducting a trial at your facility, please contact the WPA direct.	
They don't quote a minimum pressure application. Refer to FPLMA presentation.	
Yes. It is common practice to adjust the seetup to achieve the best application outcomes. It is our longer term plan to use the Tekscan to better understand the variables of label application.	
The lowest pressure measured as 34kPa. This is the lowest the activation pressure can be for the label.	
Currently the rubber z-wipe is the recommended application method.	
	This was raised at the Forum and forms part of the audio presentation on our website
The measurements are for the surface of the sensor. In some cases this does match with the actual label, in others it may be larger or smaller. The force varies as the bottle moves past the sensor. This can be seen in the graphs as the readings go up and down. Variations in the label thickness (high build inks, etc.) and variations in the label panel (sink and bulge) can impact on the force applied between the label and bottle.	