Pyramid bag - Risk identification													
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Operation:	1. Purchasing	2. Conversion	3. Reel OD	4. Form Fill Seal	5. Check Weigh	6. Hand collate	7. Flowrap	8. Metal Detect	9. Case pack	10. Palletise	11. Distribute	12. Sell (Customer)	13. Use (Consumer)
Comments:	1.1. A simple mono- layer material will cause few problems, wide range of suppliers. 1.2. Food contact clearance.	2.1. Complex artwork for pyramid pack. 2.2. Special materials, lacquers etc.?	3.1. Will the film gauge change?	4.1. Does the process imply that a Pyramid will always be slower than a conventional pouch? 4.2. More complex machine will be more difficualt to operate and require longer set-up and maintenance times. 4.3. Will the machine be pyramid only? If so where will other products be produced. 4.4. What will be the final bag dimensions (to allow for spreaders etc.) 4.5. What material specification will work?	5.1 Should be no different, may need to check that the pyramid bag shape does not cause problems on the conveyors.	6.1 Should be little difference depending on the collation pattern necessary for the flowrapper and the handling charecteristics of the pyramid bag and its material.	7.1. Totally different inner bag shape will require a different collation pattern and possibly new fold box and outer bag dimension.	8.1 No difference unless metal detection is effected by a novel material.	9.1 Different outer bag dimensions may effect case fill and dimensions. This could be for the better or worse.	10.1 Increased case dimensions will reduced cases / pallet Increased distribution costs	11.1 Storage and distribution performance depends on the packaging material thinner (weaker?) material may increase damage risk	12.1 Different outer bag dimensions may effect merchandising, either reducing or increasing face area.	13.1. There has been a favourable response from limited consumer research. However this is related to the pyramid shape and been tempered with dissappointment at the difficulty in handling, opening and dispensing the bag.  13.2. Except for the possible difference in dimensions and graphics the outer bag will be the same.
Risks	1.1 None	2.1 Complex print layout leads to incorrectly laid out artwork	3.1 Increased gauge will increase changeover frequency	4.1 Inability to produce a pyramid bag of appropriate quality	5.1 None	6.1 Will the pyramid bags need to be collated differently for flowrapping, more complex = slower	7.1 4 x pyramid bags will not work in a flowrap	8.1 None	9.1 A different outer bag may be more difficult (slower) to load into the case	10.1 If a case with different dimensions is required the cases per pallet may reduce	11.1 A different (thinner and weaker) pyramid bag material may increase distribution and storage damage	12.1 Different outer bag dimensions may effect shelf utilisation / impact - could be resisted by the trade	14.1 The difficulties handling, opening and dispensing the pyramid outweigh the novelty of the shape.
	1.2 None	2.2 Unfamiliar material causes conversion problems and delays delivery		4.2 Pyramid bag greatly reduces running speed		6.2 Will the material or dimensions effect the ease of handling	7.2 Flowrap speed will be slower with the pyramid bag collation.		9.2 If a case with different dimensions is required the case price may increase		11.2 The pyramid shape may be inherently more prone to damage		
				4.3 Pyramid bag greatly increases changeover times			7.3 Outer bag dimensions will need to change to accomodate the pyramid bag				11.3 A lacquer type valve may reduce seal strength at - 20C.		
				4.4 Pyramid bag machine leads to increased maintenance requirements									
				4.5 Ability to change between pyramid and conventional bags for veg mixtures									
				4.6 Machine constraints lead to unsatisfactory bag dimensions 4.7 Machine									
				constraints lead to unsatisfactory bag materials									

## Pyramid bag - Risk analysis and actions

Operation	Risk Description	Likelihood	Impact	Risk Score	Actions	Related Task from Project Plan	Who
1. Purchasing	1.1 None						
2. Conversion	2.1 Complex print layout leads to incorrectly laid out artwork	/ Medium	High	6	Discuss with machine and film supplier, ideally support with line trials	Feasibility Testing - Production Technical Drawings for artwork	Pack Dev / Supplier
	2.2 Unfamiliar material causes conversion problems and delays delivery	Low	High	3	Discuss with film supplier and support with trials	Agree pack specification for Capability Phase Supplier Substrate Manufacture	Pack Dev / Supplier
					•	Cappillo Caberrale Manaradare	
3. Reel OD	3.1 Increased gauge will increase changeover frequency	Low	Low	1	Discuss with film supplier and support with trials	Agree pack specification for Capability Phase Supplier Substrate Manufacture	Pack Dev / Supplier
						Supplier Substrate Manufacture	
4. Form Fill Seal	4.1 Inability to produce a pyramid bag of appropriate quality	Medium	High	6	Trials at the machinery supplier and factory.	Feasibility Testing - Production	Pack Dev / Engineering / Production / Supplier
	4.2 Pyramid bag greatly reduces running speed	High	High	9	Trials at the machinery supplier and factory.	Feasibility Testing - Production	Pack Dev / Engineering / Production / Supplier
	4.3 Pyramid bag greatly increases changeover times	High	Medium	6	Trials at the machinery supplier and factory.	Feasibility Testing - Production	Pack Dev / Engineering / Production / Supplier
	4.4 Pyramid bag machine leads to increased maintenance requirements	Medium	Medium	4	Factory assessment	Feasibility Testing - Production	Pack Dev / Engineering / Production / Supplier
	4.5 Ability to change between pyramid and conventional bags for veg mixtures	High	High		Machinery supplier will confirm	Feasibility Testing - Production	Pack Dev / Engineering / Production / Supplier
	4.6 Machine constraints lead to unsatisfactory bag dimensions	High	High	9	Supplier and factory trials	Feasibility Testing - Production	Pack Dev / Engineering / Production / Supplier
	4.7 Machine constraints lead to unsatisfactory bag materials	High	High	9	Supplier and factory trials	Feasibility Testing - Production	Pack Dev / Engineering / Production / Supplier
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5. Check Weigh	5.1 None						
6. Hand collate	6.1 Will the pyramid bags need to be collated differently for flowrapping, more	Low	Medium	2	Trials at the machinery supplier and factory.	Feasibility Testing - Production	Pack Dev / Engineering / Production / Supplier
	complex = slower 6.2 Will the material or dimensions effect the ease of handling	Low	Low	1	Trials at the machinery supplier and factory.	Feasibility Testing - Production	Pack Dev / Engineering / Production / Supplier
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7. Flowrap	7.1 4 x pyramid bags will not work in a flowrap	Low	High	3	Trials at the machinery supplier and factory.	Feasibility Testing - Production	Pack Dev / Engineering / Production / Supplier
	7.2 Flowrap speed will be slower with the pyramid bag collation.	Low	Low	1	Trials at the machinery supplier and factory.	Feasibility Testing - Production	Pack Dev / Engineering / Production / Supplier
	7.3 Outer bag dimensions will need to change to accomodate the pyramid bag	High	High	9	Trials at the machinery supplier and factory.	Feasibility Testing - Production	Pack Dev / Engineering / Production / Supplier
8. Metal Detect	8.1 None						
9. Case pack	9.1 A different outer bag may be more difficult (slower) to load into the case	Medium	High	6	Factory trials	Feasibility Testing - Production	Pack Dev / Engineering / Production / Supplier
	9.2 If a case with different dimensions is required the case price may increase	Medium	Medium	4	Factory trials	Feasibility Testing - Production	Pack Dev / Engineering / Production / Supplier
	saud prior may morease			4			очрыны
10. Palletise	10.1 If a case with different dimensions is	Low	High	2	Factory trials	Feasibility Testing - Production	Pack Dev / Engineering /
	required the cases per pallet may reduce			3			Production / Supplier
11. Distribute	11.1 A different (thinner and weaker)	Low	High	2	Factory trials to produce	Feasibility Testing - Distribution	Pack Dev
	pyramid bag material may increase distribution and storage damage 11.2 The pyramid shape may be inherently	Low	High	3	packs followed by distribution and storage trials Factory trials to produce	Feasibility Testing - Distribution	Pack Dev
	more prone to damage  11.3 A lacquer type valve may reduce seal	Medium	Medium		packs followed by distribution and storage trials Factory trials to produce	Feasibility Testing - Bench	Pack Dev / Supplier
	strength at -20C.			4	packs followed by distribution and storage trials	n Feasibility Testing - Distribution	
12. Sell (Customer)	12.1 Different outer bag dimensions may	Medium	High		Factory and supplier trials to	Agree concepts for Feasibility Study	Pack Dev / Marketing
(-20001101)	effect shelf utilisation / impact - could be resisted by the trade		. <del>.</del>	6	confirm dimensions	Feasibility Testing - Bench Feasibility Testing - Production	
40 11	44.4 The difficulties have the	Lligh	Hiet		Concrete	Arres consists for Fig. 17. 20.	All
13. Use (Consumer)	14.1 The difficulties handling, opening and dispensing the pyramid outweigh the novelty of the shape.	підп	High	9	Generate concepts, hand made samples, specs and confirm with line trials	Agree concepts for Feasibility Study Feasibility Testing - Bench Feasibility Testing - Production	All