

## **VET Value Chain –Tasmania**

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### **Abstract**

The Skills Tasmania Service Provider Committee sought to develop an academically and intellectually defensible framework to analyse the Vocational Education and Training (VET) system, which the Committee believes needs to become more outcome-focused rather than process-focused. Value Chain analysis, which is rapidly gaining currency in production and manufacturing, was selected as the tool for this analysis.

Value chain analysis looks at the activities and processes of a supply chain to determine where value is created for the consumer. Although the value chain concept was developed for the manufacturing industry, its principles can also be applied to the service sector. However, there is a lack of literature on the application of value chain analysis in the service sector and particularly in the VET sector. The VET Value Chain project commissioned by the Service Provider Committee of Skills Tasmania will map a value chain for VET with the purpose of identifying activities, actions and policy decisions which will enhance value for the consumer. There are three consumers of VET in Tasmania: learners, employers, and Skills Tasmania who is a major purchaser of VET.

In the first instance research focuses on the value chain for apprenticeships and traineeships. As part of the project, surveys of employers and individual learners were undertaken in late 2009. The surveys identified the value that these consumers associate with various aspects of apprenticeships and traineeships. A summary of results of these two surveys is included in this paper.

The results of the consumer research will be used in the second stage of the project which will involve approaching entities in the chain and investigating possibilities for the improvement of existing value-adding activities or the introduction of new value-adding activities. Also, activities which are not value-adding will need to be reviewed to ascertain whether they are necessary or not.

### **Introduction**

Value chain analysis is a model that was first described by Michael Porter in his 1985 book *Competitive Advantage: Creating and Sustaining Superior Performance*. A value chain incorporates the various entities and processes involved in the supply of a product and focuses on the activities where value is created for the consumer. Each chain member, be it raw material suppliers, manufacturers, retailers, etc, performs activities which add value to the final product. They also perform activities which may not add value but are necessary, such as invoicing, reporting, and paying wages. In some cases, members may perform activities that do not add value and are not necessary. These can be termed waste activities.

Value chain analysis looks at the activities of a supply chain as well as the processes involved to determine where value is created for the consumer. Processes include

those within organisations as well as those between organisations. For example, an internal process may be the packaging of the product; a process involving two organisations could be the transport of the product to the retailer. A value-adding activity for the internal process may look at ways of improving efficiency in the packaging process (and so, lowering costs to the consumer); or may look at the type of packaging used and adapt it to match consumer preferences.

Value Chain Management involves a deliberate decision by chain members to find ways of making improvements to the product so that more value is delivered to the consumer. It also involves a deliberate decision to make improvements in the value members deliver to each other (thus ultimately increasing value delivered to the consumer).

Value chain analysis in a manufacturing environment involves three dimensions:

1. Material flow
2. Information flow
3. Relationships

Material flow analysis examines the activities involved in the flow of materials through the supply chain. Each activity can then be classified as necessary, wasteful, or value-adding.

Information flow through the chain can be identified as strategic or operational. Information flow analysis looks at ways of making improvements in information flow that can have an effect on the value produced.

Relationships within and between organisations can have a big impact on value-adding. Strong relationships are based on trust-building and influence both the material flow and the information flow.

**Chart 1: Value Chain of a Milk Product – Material Flow**

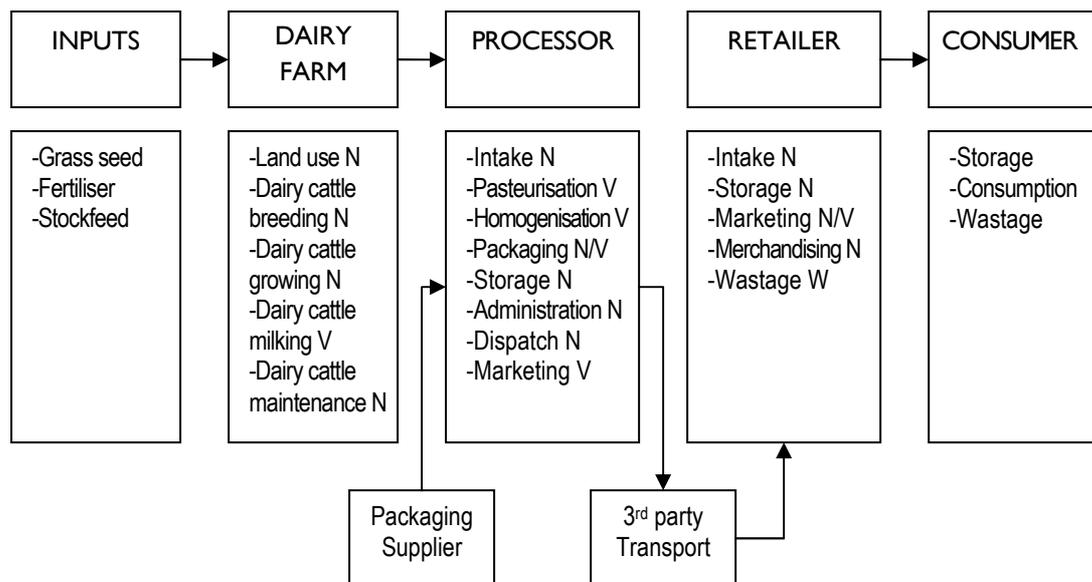


Chart 1 depicts an example value chain for a milk product. Necessary activities are marked N, Wastage activities are marked W, and value-adding activities are marked V. The arrows represent the material flow. It is possible to also draw a chart

with arrows representing information flow and relationships. Information flow between chain entities can be weak, average, or strong. Similarly for relationships. By improving information flow and relationships in the chain, new value-adding activities or possible improvements may be identified.

Skill Tasmania's VET Value Chain project (commissioned by the Service Provider Committee) aims to map a value chain for VET and to utilise value chain analysis to identify activities, actions and policy decisions which will enhance value delivered to the end consumer. The reason why the value chain analysis model was chosen, was because of its emphasis. Supply chain analysis focus more on processes and on the supply side; value chain analysis focuses more on the demand side, on the inherent value of the product a consumer buys and utilises. In the first instance the project looks at the value chain for apprenticeships and traineeships. However, findings could have wider application.

The overarching purpose of the project is to maximise the value created for the end consumers of apprenticeships and traineeships in the VET value chain: learners, employers, and Skills Tasmania as the major purchaser.

### **Research method**

The method used for creating a draft value chain for traineeships and apprenticeships included desktop research relating to the value chain concept. Since little literature existed on value chains for VET – or even for services in general – it was a matter of taking the principles for value chains in the manufacturing sector and adapting them for the VET sector and apprenticeships/traineeships in particular. The first draft was created and taken to key stakeholders including Skills Tasmania staff and the Service Provider Committee which is comprised of representatives of public and private training organisations (RTOs), Apprenticeship Centres, Group Training Organisations, employers, and the Tasmanian Qualifications Authority. Following the stakeholder input the first draft was finalised.

The work of Bonney, Clark and Dent (2009) on conducting value chain analyses for agricultural food products prompted re-examining the value chain for apprenticeships and traineeships and drafting a value chain model with a different perspective from the first draft. The new model listed activities performed by each of the entities and assigned an estimate of the value associated with each activity (whether the activity was value creating, necessary, or wastage).

To gain an understanding of the value consumers associate with traineeship and apprenticeship activities, two surveys were conducted: one for employers and one for learners (trainees and apprentices).

The learner survey was conducted in two stages.

The first stage was a pilot survey conducted in September-October 2009 with 15 trainees and apprentices. These learners were undertaking qualifications in the fields of business, hospitality, automotive mechanical technology, transport and distribution, and engineering – fabrication trade. The pilot survey was conducted face-to-face at the learners' workplace with semi-structured interviews. The purpose was to confirm

the training-related aspects which would be covered in the main survey and to ensure that all major aspects were captured. The main survey instrument was also tested for ease of comprehension and flow in this first stage of the survey work.

The second stage was the main survey. This was an on-line survey which was emailed to 1,826 learners. This sample was selected from learners who had commenced their traineeship or apprenticeship between 1 September 2008 and 31 July 2009 and who had either completed their Training Contract or were active at the time the data was extracted. The total population of eligible learners was 6,101. It included both publicly funded and employer funded apprentices and trainees.

A total of 608 valid responses were received from learners. There were 211 respondents undertaking training in Business Services. This accounted for 35% of all respondents. The equivalent figure for the total population was 14%. Therefore, responses were weighted to bring the Training Package distribution of respondents closer to the distribution of the population. Responses were received by employer funded as well as publicly funded learners.

The methodology for the employer survey was similar, involving a pilot survey and a main survey. For the pilot survey, the employers of trainees and apprentices participating in the learner pilot survey were interviewed. For the main survey, a sample of employers was selected from Skills Tasmania's database. All of these employers had one or more apprentices and/or trainees who had commenced their training between 1 September 2008 and 31 July 2009. The total population of eligible employers was in the vicinity of 2,300.

Two methods were used for collecting responses:

1. On-line survey: The database recorded email contact details for 287 employers. All of these were emailed an invitation to participate in the survey. A total of 121 responses were received.
2. Postal survey: Approximately 900 letters were sent out inviting employers to participate in the survey. Employers were given the option to either reply by post or to complete the on-line survey. A total of 296 responses were received, with 22 of these being on-line.

The grand total of valid responses received from employers was 415.

## **Findings**

The first draft of the value chain for apprenticeships and traineeships can be seen in Chart 2. This is a flowchart version which shows the various activities in the chain, whether they have a direct or indirect impact on the outcome, as well as the entities involved in the chain. This chart also shows the flow of activities within the chain and how they feed into the training process. The main perspective of this draft is the individual: starting with an unskilled individual the training process produces a skilled individual. Through the assessment process, the individual is also issued a qualification.

**Chart 2: Draft Value Chain for apprenticeships and traineeships – Flowchart**

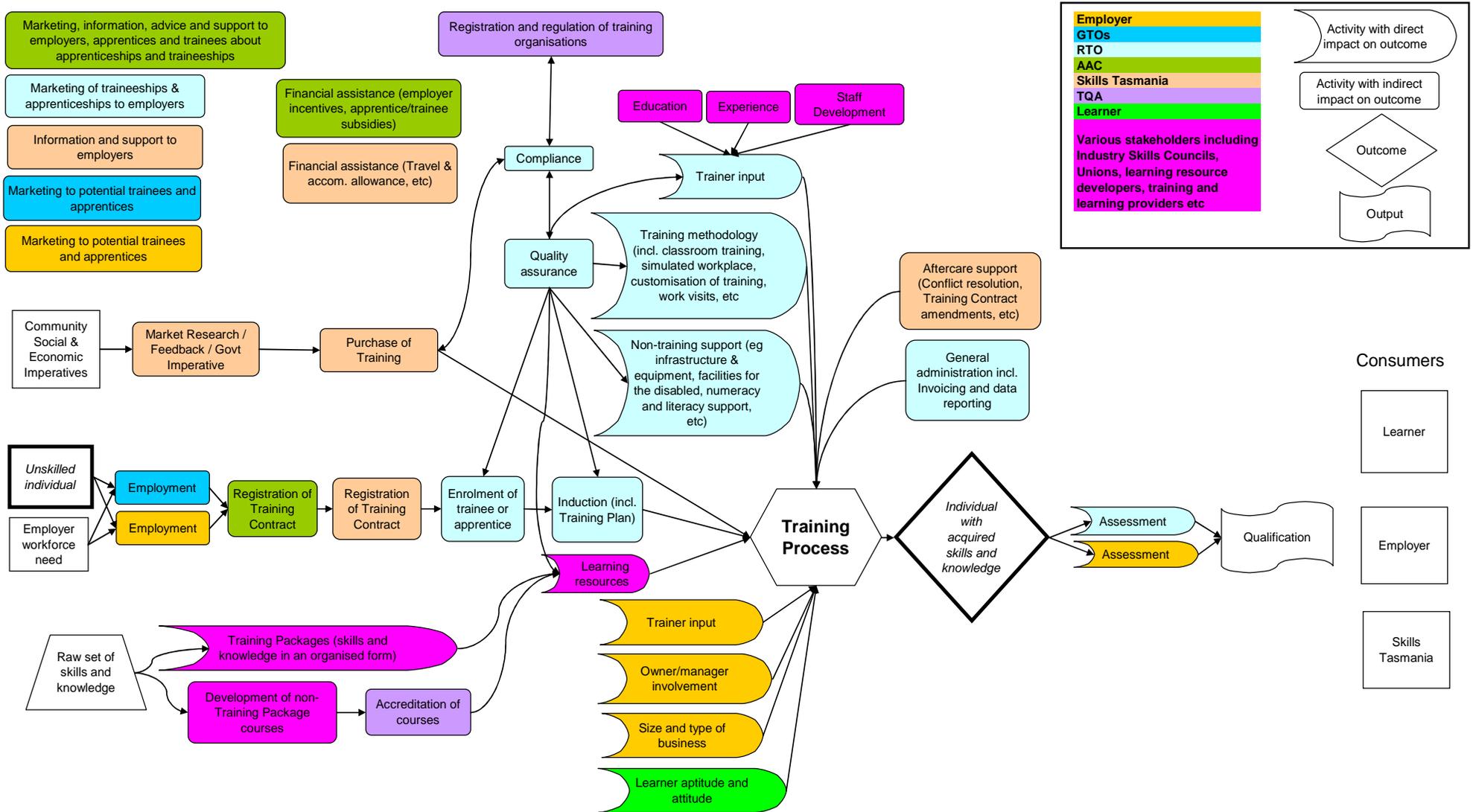
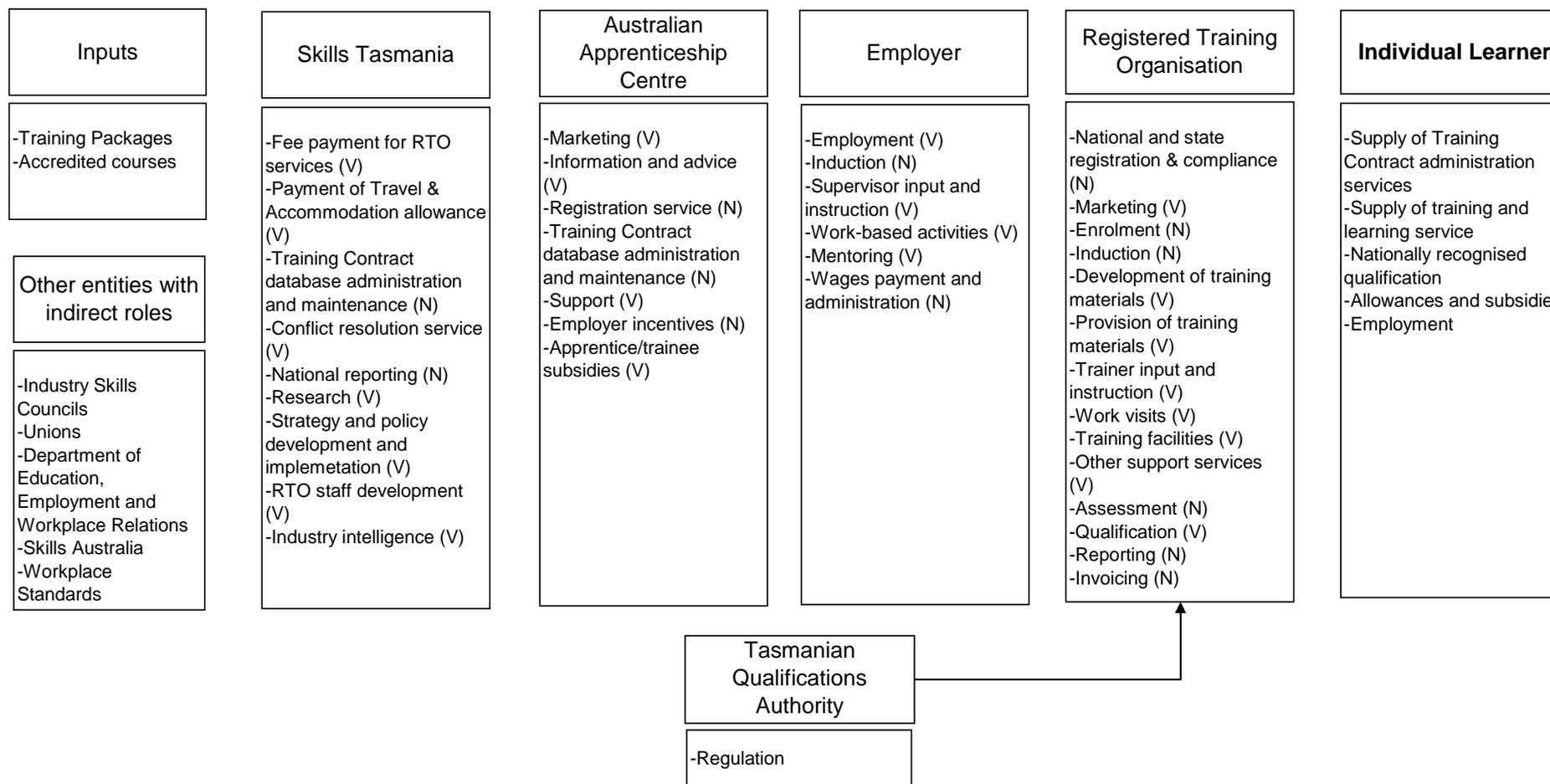


Chart 3 shows the value chain for apprenticeships and traineeships from a different perspective. Here the emphasis is on the consumer and the entities forming part of the chain. In this version of the chain, activities are consolidated within each entity and an attributed value estimate is ascribed to each activity. Activities which are value adding are marked V. Activities which may not add much value but are necessary are

marked N. The final frame shows the main aspects of the product for the consumer. This chain may not necessarily have a linear flow of supply of services. For example, Skills Tasmania provides services to employers, as well as to registered training organisations, as well as to individual learners.

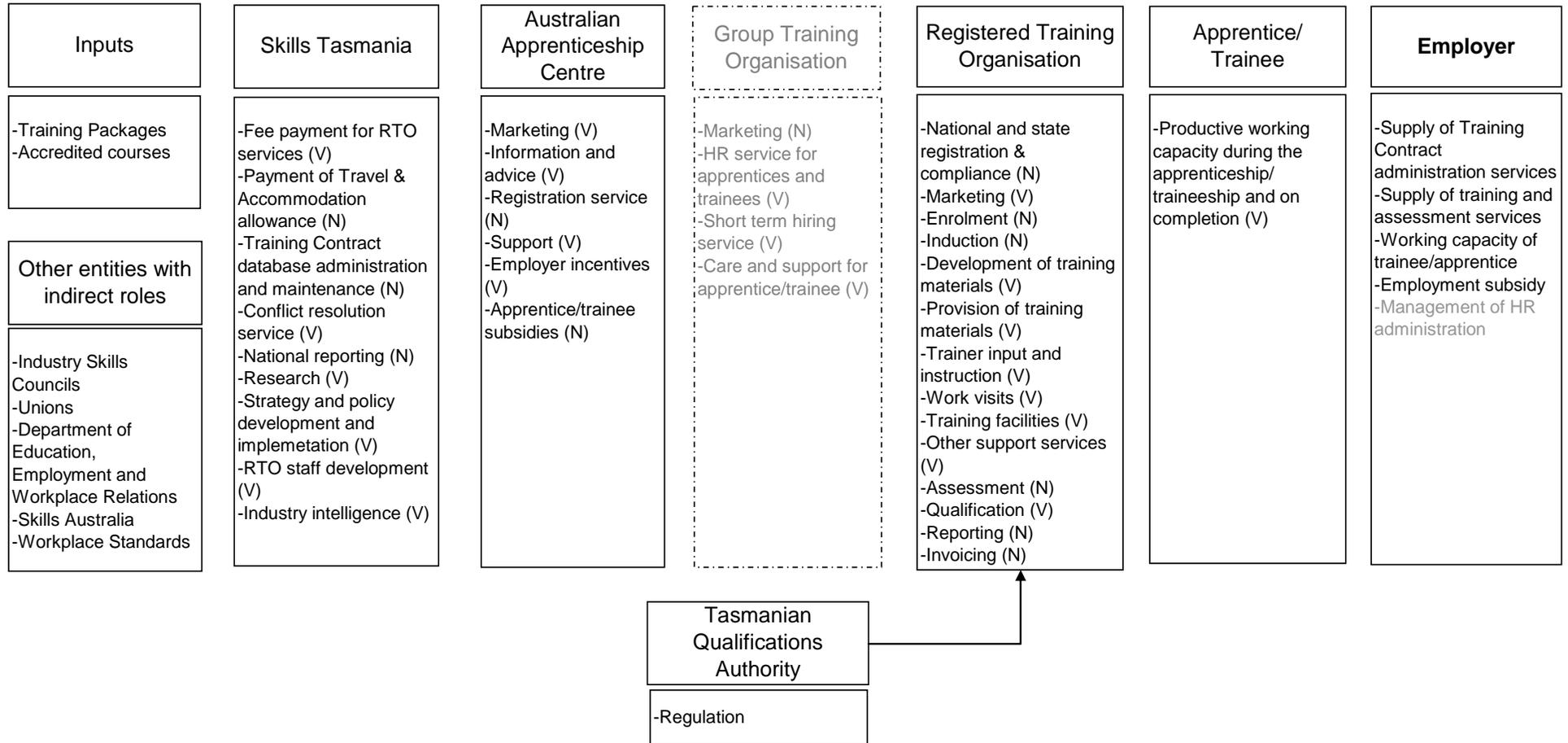
**Chart 3: Value chain for apprenticeships and traineeships – Consumer 1: The individual learner**



While Chart 3 shows the value chain with the learner as the consumer, Chart 4 shows the value chain with the employer as the consumer. Group

training organisations (GTOs) and their activities appear in a lighter tone as they may not always be part of the chain.

**Chart 4: Value chain for apprenticeships and traineeships – Consumer 2: The employer**



With the emphasis in value chains being on the consumer, it is important to know what consumers of apprenticeships/traineeships perceive as value. A summary of the findings of the learner and employer surveys undertaken in Tasmania follow below (more detailed reports on both surveys can be found on Skills Tasmania's website – [www.skills.tas.gov.au](http://www.skills.tas.gov.au)). It is important to note that these surveys were different to satisfaction surveys in that respondents were not asked to rate their current work and training experience; rather, they were asked to answer questions according to what they valued; what they considered important.

Firstly, findings for the apprentice and trainee survey.

About two thirds of respondents said the main reason they were in the apprenticeship/traineeship was because they wanted the training/qualification; about one out of five because it was initiated by their employer; and one in ten because they wanted a job. When it came to who provided the majority of their training, 38% of respondents indicated "My employer", 29% said "The training organisation", 19% said "They provide about the same amount", and 14% said "I largely teach myself".

Respondents were asked to indicate how important to them were various aspects that had to do with their training and skill development. Responses were elicited for four areas: motivation for undertaking the traineeship/apprenticeship, training related aspects, aspects relating to the RTO, and employer-related aspects.

In terms of motivation for undertaking the traineeship or apprenticeship, out of the eight aspects listed, the aspects that scored the highest were - in order of score levels - "Gaining skills and knowledge", "The qualification is nationally accredited", and "Gaining the qualification". When asked to choose only one or two aspects as the most important, "Gaining skills and knowledge" scored the highest, with "Gaining the qualification" coming second. The aspect that scored the lowest overall was "I don't have to pay for the training".

In terms of practical aspects of the training experience, respondents had twelve aspects to rate. The aspects that scored the highest (in descending order) were "The training teaches me skills I can use in my workplace", "The training teaches me the theory that will help me apply my skills in different situations and different workplaces", and "I have many opportunities for hands-on training". When asked to choose one or two of all the aspects as the most important, the aspect with the highest score was "The training teaches me skills I can use in my workplace". This was followed by three other responses with very close scores to one another: "I am able to complete the apprenticeship /traineeship early if I reach the competency required", "I have many opportunities for hands-on training", and "I receive recognition for skills I already have (RPL)".

Respondents were asked to rate seven aspects relating to the training organisation. The two aspects that scored the highest were "My trainer is very competent in the skills and knowledge he/she is teaching", and "My trainer is good in helping me understand the things I need to learn". When asked to choose only one or two of all the listed aspects as the most important, the same two aspects topped the list. This shows how much value apprentices and trainees place on a good trainer.

The fourth area in the survey covered five employer-related aspects. The two aspects which scored the highest were “My employer gives me opportunity to practice what I learn so my skills develop and I can reach the required standard” (scoring the highest) followed by “It is easy to approach my supervisor/boss when I want help with something I’m learning”. The same two aspects topped the list when respondents were asked to choose only one or two aspects as the most important.

Trainees and apprentices were asked a question about assessment practices. The question had two possible responses. About three quarters indicated it was more important for them that the training organisation set a high and consistent standard for their assessment. Nearly a quarter of respondents chose the second response: “I just want to pass the assessment so I can move on – the standards of the assessment are not my priority”.

Three quarters of respondents indicated they would value a one-stop-shop that would provide information for skills and training. Most of the remaining respondents did not express an opinion.

Analysis was carried out for respondents who were enrolled in traditional apprenticeships. Results for apprentices were similar to the general results with a few exceptions, including the following: Regarding the main reason for being in the apprenticeship/traineeship, 82% of apprentices indicated “I wanted the training/qualification”. This compares with 68% for all respondents. Compared with all respondents, there were significantly less apprentices who thought that the qualification being nationally accredited was important (64% compared with 84% for all respondents), and significantly more who thought that not having to pay for the training was important (76% compared with 50% for all respondents).

Cross-tabulation results show there was a larger share of employer-funded respondents who indicated the training organisation provided the majority of their training compared with respondents who were state-funded (40% and 25% respectively). Reversely, 42% of publicly funded respondents said the employer provided the majority of their training, compared with 29% of the employer funded respondents. Also, there were more employer funded respondents saying they largely teach themselves compared with publicly funded respondents. Another two significant differences between employer and state funded respondents were, firstly, that the ability to receive recognition for existing skills is more important for those who are employer funded, and, secondly, the ability for early completion is more important for those who are publicly funded.

Respondents were given the opportunity for feedback with two open-ended questions. The two most commonly occurring themes were the desire for more contact with the RTO, and training resources that are up-to-date, easy to understand and easily accessible especially via the internet.

Finally, an indirect benefit stemmed from the process of analysing the results. A number of learners expressed dissatisfaction or the existence of a problem with their RTO or employer. These survey responses were referred to the Skills Tasmania training consultants’ team who contacted the trainees/apprentices and offered

assistance for resolving any issues. In this way, a number of trainees/apprentices received assistance who may not have otherwise contacted Skills Tasmania.

Turning to the employer survey, results showed that nearly half of the respondents indicated that their business provided the majority of the training. Only 17% indicated that the training organisation provided the majority of the training. Only 1% of respondents indicated the trainees largely teach themselves.

Respondents were asked to indicate how important to them were various aspects that had to do with apprenticeships and traineeships. Responses were elicited for three areas: signing up a trainee/apprentice, aspects relating to the RTO, and aspects relating to the apprentice/trainee.

In terms of signing up a trainee/apprentice, the aspect that scored the highest was “Meeting the future workforce needs of the business” (90% of respondents considered it either “Very” or “Extremely important”). This was followed by “Meeting the present workforce needs of the business” (83%), “Increasing skills and knowledge for the industry” (82%), and “Improving productivity for the business” (78%). The aspect that scored the lowest was “Ability to hire workers on a training wage” (27%).

In terms of aspects relating to the RTO, the aspect which scored the highest was “The trainer knowing their subject well” (92% of respondents considered it either “Very” or “Extremely important”). This was followed by “The training organisation following up on my requests” (84%), and “The training organisation offering flexibility in the provision of training (time and method of delivery)” (80%). When asked to choose one or two of these aspects as the most important, the two aspects which scored the highest with almost equal scores were: “The training organisation offering flexibility in the provision of training (time and method of delivery)” (51%) and “The trainer knowing their subject well (50%).

Respondents were asked to rate three aspects relating to the apprentice/trainee. All three aspects scored relatively high. The aspect which scored the highest was “The apprentice or trainee having good work ethics”. The second highest scoring aspect was “The apprentice or trainee having the capacity to meet the training requirements and deliver practical outcomes”. The third aspect was “The apprentice or trainee fitting in well with the rest of the team”.

Respondents were asked to indicate their level of agreement with seven statements.

The statement gaining the strongest level of agreement by respondents was “I want the training organisation to set a high and consistent standard for the competence of my apprentices/trainees before signing off” with 96% of respondents indicating agreement with this statement.

The statement with the highest disagreement score was “I want the training organisation to sign-off my apprentices/trainees as competent as soon as they are ready so they can complete as early as possible”. About a quarter of respondents (26%) disagreed with this statement. At the same time, half of the respondents indicated their agreement.

The statement “I place significant value on the qualifications gained through traineeships or apprenticeships” was the second highest scoring statement: 92% of respondents agreed/strongly agreed with this statement.

Only six out of ten respondents (60%) agreed with the statement “I find it easy to find information about training my staff”. On a similar theme, 82% indicated agreement with the statement “I would value a ‘one-stop-shop’ that would provide information for skills and training. This information would relate to services provided across all levels of government and would include information on training organisations, financial incentives, apprenticeships and traineeships, and other training options available to employers and learners”.

More than half of employers (55%) agreed with the statement “I want my business to provide the majority of the training and the training organisation to mainly provide learning resources and manage the assessment”. At the same time, nearly seven out of ten employers (69%) indicated agreement with the statement “I want the training organisation to deliver substantial training as well as assessment for my trainees/apprentices”.

Respondents were given the opportunity for feedback with two open-ended questions. Responses were scanned and categorised by theme. The most commonly occurring themes were: more support or services to be supplied by RTOs; suggestions for additional training to improve the skills of trainees/apprentices; suggestions and comments around funding and incentives; and suggestions and comments around training and/or assessment standards.

Finally, as with the trainee and apprentice survey, in the process of analysing the results of the employer survey it was observed that a number of employers expressed dissatisfaction or the existence of a problem with their RTO. These survey responses were referred to the Skills Tasmania training consultants’ team who contacted the employers to offer assistance for resolving any issues. In this way, a number of employers and trainees/apprentices received assistance who may not have otherwise contacted Skills Tasmania.

## **Conclusions**

The value chain model for the apprenticeship and traineeship system provides an alternative model for the system, which places the consumer in the centre. The model puts emphasis on what consumers value and not only on what the system provides. It also draws attention to the value attached to activities within the VET system. Some of these activities add value for the consumer; some don’t. Some may be necessary and some may be not or they may be duplicated. The strength of information flow and the strength of relationships within the entities of the chain can also influence the creation of value for each entity and for consumers. More research needs to be carried out in this area.

The two consumer surveys highlight traineeship/apprenticeship aspects and services which employers and learners value. Both employers and learners place significant value on a good trainer who knows their subject well and who’s able to pass on the knowledge and skills trainees and apprentices need to learn. The majority of both

employers and learners want the training organisation to set a high and consistent standard for assessing competence. At the same time, the ability for early completion is very important to apprentices and trainees, as well as to a number of employers (noting also that 27% of employers disagreed with the concept of competency-based early completion).

Results also show that employers place significant value on the qualifications gained through traineeships and apprenticeships. And according to apprentices and trainees, one of the most important aspects of what an employer can offer, is to give them the opportunity to practice what they learn so their skills develop to the required standard.

The value chain model incorporating the findings of the consumer survey can be used for a number of purposes. Training organisations and other service providers can use the model for their business planning. Government bodies can use it for policy development. Training Authorities can use it to inform their purchasing decisions.

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