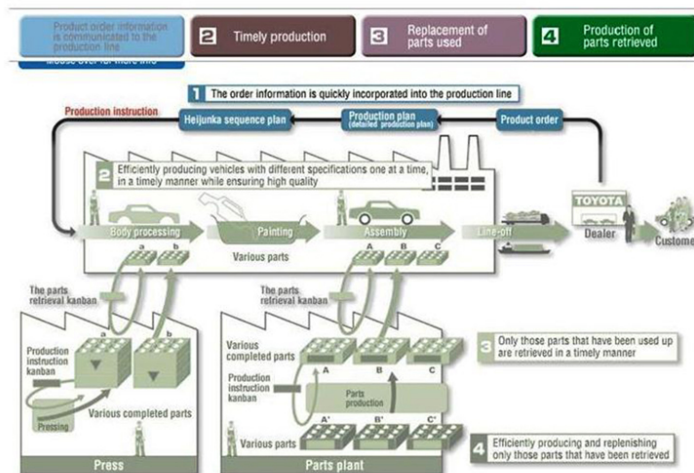


Student 4: High Achieved
 NZQA Intended for teacher use only

[1] Throughout the Melbourne factory, as in all Toyota facilities, the core values of 'The Toyota Way' are shared and practised by employees - at every level in their daily work and in all relations with others. This is the foundation for the over-riding company aim of continuous improvement to ensure sustainable customer satisfaction. Under this system employees are formed into teams and empowered to optimise quality by making constant improvement in the processes used and cutting out all unnecessary waste. This Toyota Production System (TPS) has established a global reputation as a proven business philosophy that delivers measurable benefits in terms of efficiency and quality in manufacturing.



[2] Time planning is a central consideration of TPS, with the optimum time for each new task initially calculated and regularly monitored. This reduces waste and inefficiency by eliminating the risk of time delays, or excess production, throughout the process.

[3] Product flexibility, with efficient, smooth workflows requires the right tools and materials at the right place at the right time. In TPS it means having just the right components to build the product. Use of kanban cards means that only a minimum stock of components is held in the assembly area. This stock control process is based on a 'pull' principle – with items called only as they are required, as opposed to a 'push' principle that may not take account of actual need.



[4] Application of TPS produces a smooth, continuous and optimised workflow, with carefully planned and measured work-cycle times and on-demand movement of goods. The costs of wasted time, materials and capacity are reduced allowing team members to concentrate on their tasks without interruption. The end result is simple - safer practice, better product quality, more timely delivery, and satisfied customers.

[5] When it comes to quality the TPS ensures that there can be no compromises. Quality checks are built into each step of the production process, and by ensuring that all processes are visible, any abnormalities are made visible and so safety and quality issues can be addressed immediately. Improvements to the production process are regularly made as a result of discovering problems. When a problem is found the emphasis is on getting a thorough understanding of the nature of the problem before attempting a solution. In this way problems do not generally re-occur.

[6] TPS is a strategy which can successfully address new company policy like the current drive to reduce environmental risk factors. Harmful CO2 emissions are carefully monitored at all stages in the life cycle of the car, and care is taken to ensure that necessary resources are used efficiently. The belief is that it is only by taking a responsible approach that real environmental benefits will be achieved – and that this respect for the environment will fit in with increasing customer-awareness of their individual responsibility towards minimising environmental impacts.

[7] Safety is not just a priority but a necessity in all of the practices that make up the TPS. The company-wide effort to consistently do things in the best possible way would never work if worker safety had to be compromised. The belief is that when processes are improved to increase quality, safety is also improved. Manufacturing sites such as Altona have achieved international quality assurance recognition through processes such as OHSAS 18001 certification for occupational health and safety management, anticipating and reducing potential risks factors and working to prevent workplace accidents.

[8] In the Australian factory, as in all other Toyota plants, ergonomic factors and the maintenance or improvement of health and safety are essential when processes are revised or when the introduction of new equipment is considered. TPS is set up to use available automation technology and ongoing process improvement to protect workers. The flexibility which it requires of team members helps them to be alert and better focused as their tasks change. Workstations are specifically designed to be easy-to-use, to make sure that people can work quickly and comfortably as well as efficiently. In making changes all team members, from management to the shop floor, participate in the required safety training and are encouraged to making suggestions for ongoing improvements.