

Prediksi waktu pengembangan platform pada produk multi generasi menggunakan artificial neural network = Predicting the development time of platform for multiple generation product using artificial neural network

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Abstrak

[ABSTRAK

Perkembangan teknologi otomotif di dunia yang sangat pesat menuntut para pelaku industri otomotif untuk terus-menerus mengembangkan teknologi dan inovasi terbaru. Namun, inovasi yang dilakukan di industri otomotif tidak lagi terbatas pada inovasi produk namun juga pada proses pengembangan produk. Salah satunya adalah dengan menerapkan strategi product platform. Penelitian ini dilakukan untuk memprediksi waktu pergantian platform pada salah satu jenis produk multi-generasi, yaitu produk otomotif, dengan menggunakan metode peramalan artificial neural network. Hasil prediksi pada penelitian menunjukkan bahwa prediksi waktu pergantian platform berkisar dalam kurun waktu 32-33 quarter yang merupakan hasil yang sesuai dengan rentang waktu inovasi platform yang ideal yaitu 8-10 tahun. Selain itu, penelitian juga memperlihatkan bahwa pergantian platform pada produk otomotif kerap dilakukan ketika produk sedang berada di tahap maturity dalam siklus hidupnya serta berhasil mengidentifikasi faktor-faktor yang mempengaruhi keputusan perusahaan untuk melakukan pergantian platform.

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ABSTRACT

The rapid growth of technology in the automotive industry has forced the manufacturers to continuously develop new technology and make innovations. Nowadays, innovation in the automotive industry does not only refer to product innovation, but it refers to process innovation as well, for example by implementing the product platform strategy. This research aims to predict the development time of new platform for one of the multiple-generation product line, automotive product, using artificial neural network. The prediction from this research shows that new platform should be introduced in 32-33 quarters. This result is suitable to the ideal condition of platform innovation which is in 8-10 years. Moreover, the result shows that most of the time company decides to introduce the next-generation platform while the older generation is still in the maturity stage of its life cycle and the research also successfully identifies the factors influencing company to introduce the next-generation platform.;The rapid growth of technology in the automotive industry has forced the manufacturers to continuously develop new technology and make innovations. Nowadays, innovation in the automotive industry does not only refer to product innovation, but it refers to process innovation as well, for example by implementing the product platform strategy. This research aims to predict the development time of new platform for one of the multiple-generation product line, automotive product, using artificial neural network. The prediction from this research shows that new platform should be introduced in 32-33 quarters. This result is suitable to the ideal condition of platform innovation which is in 8-10 years. Moreover, the result shows that most of the time company decides to introduce the next-generation platform while the older generation is still in the maturity stage of its life cycle and the research also successfully identifies the factors influencing company to introduce the next-generation platform.;The

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