

TheRunnerLane — The Online Shop

Typical SOA Systems

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1 Introduction

TheRunnerLane (TRL) is a (fictitious) well-established company specialised in manufacturing and selling running equipment, being the preference of many world top athletes.

Until the last decade, its main revenue due to the sales of running equipment through the internet, in their own (pre-historic) e-commerce platform. Although they still lead the market, the CIO proposed to re-think their business by shifting the system's model into a Service Oriented Architecture (SOA) and providing new (nowadays common) features.

2 TheRunnerLane Online Shop

Shifting a well-established software system to cope with the SOA principles is a very demanding task. Innovating on top of that becomes, however, simpler since the communication and interoperability with other systems is made easier.

This way, the TRL CIO and his underlying Information Technology (IT) team developed an SOA version of their *online shop*. The following bullets present the main features of the system, in this new version.

- Customers may search for the items they desire and have at their disposal a comparison table for prices and characteristics of competitor items in the market. Such data comes from the TRL three main competitors selling similar objects. Such data may not be available, for a plethora of reasons!
- The system provides a recommendation service that for each item delivers various relations to customer' preferences (in the role of viewers or buyers). This service relies itself on a Customer Relationship Management (CRM) service provided by a public cloud like `salesforce.com`.
- A shop-cart service is provided so the customer can reserve some items and continue the reservations for any number of items. When the cart is full, the new elements added are discarded, and a message is shown to the costumers.

- When the customer chooses to purchase the items set in the cart, the system requires for an authentication or a registration process, in case of being a new customer. In either way, the system relies again on the CRM service to check the existence or the need for registration, respectively.
- The customers may choose the TRL store (or affiliate store) near their location for shipping the acquired items (recommended). The TRL business model enforces this *face-to-face* contact with the customers for a more close interaction. For a higher fee, customers may choose the shipping via traditional mail, directly to their houses (not recommended).
 - For the recommended shipping way, The location of the customer is placed over a map and all the near stores are placed around it, using a Maps services.
- The payment may be performed by using services provided by Visa, MasterCard or Paypal.