Weiwei Zha founded Zaawe in 2011 in rue du Cardinal Lemoine, 5th arrondissement of Paris. Zawee has established itself successfully in the competitive Paris window-shopping market because Weiwei is always up to date about the latest fashion and she renews her collection every week. In 2012 she opened her second shop in rue de Lévis, 17th arrondissment. As the business grew, manual management of stock became an issue for Zawee. Weiwei could not remember any more the current availability of all combinations of products and their variations in colour and size. Accumulating errors would ultimately lead to the risk of loosing clients, if products would not be sold because of wrong assumptions of their availability in stock.

Weiwei, who has no IT experience herself, eventually got to know ERP5 and its inventory management concept based on individually traceable items through her friend Jean-Paul. She also learned about ERP5 eCommerce which brought the perspective to further evolve her business with an online shop. Weiwei eventually decided to contract Nexedi to implement an ERP5-based integrated eCommerce, POS and inventory management solution for her retail business.

Company Profile

Name	Zawee	Staff	3 employees
Creation	2011	Sites	2 shops in Paris

Saving project time and budget through improvement objectives and client participation

The "weinparis" project started in July 2012 with the definition of improvement objectives that should be reached through the ERP5 implementation for Zawee. Other than for big ERP5 projects, which usually start with a detailed requirement analysis, an improvement-driven implementation approach is preferred for small projects because it saves time and budget to work on the actual software to improve the client's business instead of endless discussions about theoretical features. With Weiwei, three objectives were defined for the Zawee ERP5 implementation: To achieve an accurate view of available stock, to provide an online shop with tight integration between front- and back-office and to implement a loyalty program with social network integration.

A further measure which can help to reduce project budget is client participation. For the weinparis project, Weiwei herself did the a basic configuration of ERP5, named category configuration. Weiwei also designed the look of the online shop web site herself.

Design of the ERP5-based weinparis online shop

With this preparative work done, the actual ERP5 implementation progressed quickly: Beginning of August 2012 Alain, a professional web designer converted the raw design made by Weiwei into html code: 2 working days. Jean-Paul copied the html code into ERP5 Web and added various widgets for those parts of the website which should be generated dynamically by ERP5 such as the product catalogue: 2 working days. He requested a standard ERP5 instance which already comes with preconfigured Trade, Product Data Management (PDM) and Inventory modules on a SlapOS Webrunner in the ViFib cloud and installed the ERP eCommerce application on it.

The remaining one and a half months were spent by Nexedi project manager Rafael Monnerat to develop the new ERP5 Point of Sale (POS) application, integrate ERP5 Barcode for label printing, extend ERP5 eCommerce payment options and to implement the facebook integration for the weinparis loyalty program.

Project Key Indicators

Project Name	weinparis	Start of service	January 2013
Integrator	Nexedi SA	Time to develop finished product	3 months
Modules deployed	Trade, POS, PDM, Invenotry	Number of product variations	1486 products, 6159 variations
Number of users	3	Number of trade models	549

Accurate inventory management with individual barcode labels

The first improvement objective, an accurate view of available stock, was accomplished using an ERP5 core concept named "Item". An item symbolises in ERP5 an individual product. Management of items allow traceability of each

individual product over the whole product life-cycle. As soon as a new purchase order for one of Zawee's suppliers is created in ERP5 Trade, new items are created in the ERP5 Items module according to the number of purchased products. Barcode labels are printed directly from the purchase order: One label for each item. When the delivery from the supplier arrives, a Zawee employee sticks one label on each product. Quantity check of the delivery is included in this process automatically: If some labels remain, it means that the delivery was not complete. Since the labels are printed in advance at order time, no computer is required for the reception of purchased products.

Once stuck, the barcode is used for all movements of the products: Shipping products from one shop to another, selling the product to the client and for product return. If a client returns a product, Zawee can check if it is exactly the product that was sold, to whom it was sold and when it was sold. The fact that each barcode is individual also prevents errors and makes the inventory management user interface easier: If many items are shipped form one shop to another, each product is scanned. The individual number prevents scanning two times the same product.

Thanks to ERP5's out-of-the-box support for multiple product variations and multiple stock points, there was not more work to do to accomplish accurate inventory management: Each Zawee shop is a stock point. The stock view shows for each stock point the number of available products for each product variation, in case of Zawee: colour and size. This way, products only have to be entered once, but stock view is accurate for each variation.

Key factors for a successful POS

The weinparis project teaches important lessons for implementing a successful Point of Sale (POS) system. The first lesson is that in Europe, a purely internet based POS is possible, even if internet connection is not as reliable as in Japan. Many factors influence the reliability of the POS: The computer or printer hardware can be defect, printer might not be correctly connected to the computer, the configuration of the router can be wrong (in case of a network printer), the printer driver configuration can be wrong (in case of USB printer), there can be electricity outage, the power supply of the computer can be broken, products might not be entered properly in the system. Compared to how many events can break any electronic POS, the factor internet reliability is not an issue. The weinparis project shows the importance of a well defined exception procedure in case that the POS cannot be used for one of the reasons mentioned above. The exception procedure for Zawee was defined as follows: When the POS would be not available, calculate the sales price manually and collect labels of all sold products in a box. Then all labels are scanned at once in the evening on another computer, for example at home. This way the business can continue, even if POS is not available for any reason.

The second factor for a successful POS is to have great flexibility in adding discounts on the fly. Trade models in ERP Systems are generally based on strict rules which define under which condition which discount is applied. For a small shop which lives from the personal relations to its local clients, it is important to handle exceptions to discount rules efficiently: Giving discount to a friend, giving discount for paying by cash, giving discount on some products only for a certain period of time. In weinparis project, this challenge was solved by dynamically creating trade models on the fly whenever a new discount is entered which was not yet used before. This way, the trade model system of ERP5 can be used in the same way as in other projects and at the same time the POS allows the flexibility in defining discounts on the fly required by a small shop.

ERP5 POS running in Zawee shops in Paris

The third factor for a successful POS is to quickly handle returned good. For a shop it is crucial that returned products can be put immediately back to sale (if they are not defect). Thanks to ERP5's Item concept, product return is handled at Zawee in the same way as sales, buy simply scanning the barcode. Lastly, the fourth success factor is an efficient POS user interface, which does not get into the way of the user. Thanks to ERP5's fast input forms a POS user interface customised for Zawee was accomplished in only a few days.

One single product catalogue for eCommerce fronted and ERP backend

The second improvement objective for Zawee, integration of an online shop www.weinparis.com, was accomplished with ERP eCommerce. The web design was quickly imported into ERP5 Web. The ability to use ERP5 form fields as dynamically rendering web widgets made the construction of a custom ecommerce website easy. The project shows that an eCommerce solution which integrates online shop frontend and ERP backoffice based on ERP5 can be accomplished with a far lower budget than implementing the ever changing API of a proprietary shop solution and maintaining it.

The key advantage of eCommerce system integrated with the core ERP is that there is only one single product catalogue, only one point which holds stock information and only one client database. This way, all data for products has to be

entered only one time, (including one high quality photo for each variation which is an effort which should not be underestimated). There is no synchronisation necessary between a separated eCommerce system and the core ERP, which eliminates an important source for possible bugs. Points for a loyalty programs can be used in the same way for online sales as for sales in the shop. Also, most proprietary shop system services do not accept products which do not have EAN number, which is still very common in creative industries such as fashion.

For the implementation of the eCommerce part, the "portal skins" technology of the framework used by ERP5 is of great help: It allows to make changes to the online shop part in an isolated development space of the live ERP system, which does not affect the core backoffice part of the ERP. This was especially useful for making the payment process for the shop user as easy as possible: In the final phase of the project, Nexedi could constantly improve the eCommerce user interface without affecting the core part of the system. This eliminated the risk of introducing bugs to the core ERP5 while working on the web shop user experience. Nexedi learnt, that an eCommerce project like weinparis can be accomplished even faster, if a second developer is working on the online user experience in parallel: It takes time to make it as fluent and easy as today's online users except a modern online shop to be.

Reusing ERP5 accounting concepts to reward social network likes with shop discounts

The third improvement project in the weinparis project was to implement a loyalty program for Zawee based on social networking. The idea is that Zawee clients are motivated to promote Zawee on the internet by rewarding them with loyalty points whenever they like a Zawee product on facebook. The loyalty system is implemented using the same technology as ERP5 accounting.

Every client can get a loyalty account by registering in the online shopping web page. Loyalty points are a kind of currency. Giving loyalty is represented in the ERP by a transaction that credits the loyalty account according to a defined loyalty rule, just like a VAT rule defines how an sale transaction credits an "Earned VAT" account when a product is sold. A customer's loyalty account is not only credited when he likes a product on facebook, but also every time he purchases a product on the online shop or at the street shop using a loyalty card (or just his email address). When his loyalty account reaches a certain amount, he gets a special discount and the loyalty account is debited. It is particularly important for a local shop like Zawee with young clients that the loyalty system is the same for the street shop as for the online shop.

About facebook integration, Nexedi learnt that it can always introduce bugs: There is no guarantee about the API at all, it can change all the time. Therefore it is very important to make the rest of the loyalty system cannot be affected at all by a change in the facebook API.

When September ends...

The complete ERP5 system, including inventory management, POS, online shop and loyalty program with facebook integration was ready end of September 2012, just 3 month after the project has started. Apparel retail management is tightly related to the cycles of fashion seasons. The new winter collection arrived mid September, so there was not enough time to enter all products. Therefore Zawee officially made the switch from manual management to ERP5 in January 2013 before the new summer collection came in. Given the fact that Weiwei as well as her employees did not have any IT knowledge, the adoption was nearly instant. Training of users was very easy. The hardest part was to clarify the difference between an order and a packing list and to explain why ERP documents such as orders have to be validated to assure transparent processes.

Lessons Learnt

In Europe, it is possible to make a purely internet based POS even if internet is not as reliable as in Japan.	For social network integration one should not rely on the stability of facebook API.
It is essential to have a manual exception procedure, because so many things not related to internet connection can possibly break a POS.	An ERP used for a shop needs trade models to manage seasonal sales so that discounts are only valid for a certain period of time
Returning products must be as easy as selling products. It is crucial that returned goods can be put back for sale immediately.	Making the user experience for the payment process in an online shop perfect needs time. A second developer working in parallel on the user interface should be considered for any eCommerce project.