

# • METHODOLOGICAL GUIDE FOR THE EXPLOITATION OF COLLABORATIVE PROJECTS' OUTCOMES IN THE GNSS SECTOR •

Version 2 - 19.07.10

- Document written for the **PEGASE** project
- Provision of **Expertise to GSA And Support to Enabling activities**
  - A Coordination and Support Action funded by the
- 7th Framework Programme for Research and Development







## **Introduction**

Reducing the interval of time between final results of a RTD project and market introduction is particularly relevant in the GNSS sector where technologies and market opportunities are rapidly changing. It is a critical condition for the SMEs to turn innovative ideas and technological progress into marketable products and services while keeping their competitive advantage by being one of the first ones to penetrate the market.

This 'best practice' guide proposes a methodology to support SMEs at building up the commercial exploitation plan of their GSA-funded research project.

## The Exploitation Plan Building Up Process

The process to be implemented for the building up of the exploitation plan of any GNSS Project will be three fold, to be implemented mainly within the timeframe of the RTD project itself.



is aimed at acquiring a *FIRST STRATEGIC ANALYSIS OF THE PROJECT COMMERCIALISATION OPPORTUNITIES*: The possible routes to get to the market are identified as well as the Partners' positioning into the competitive environment.

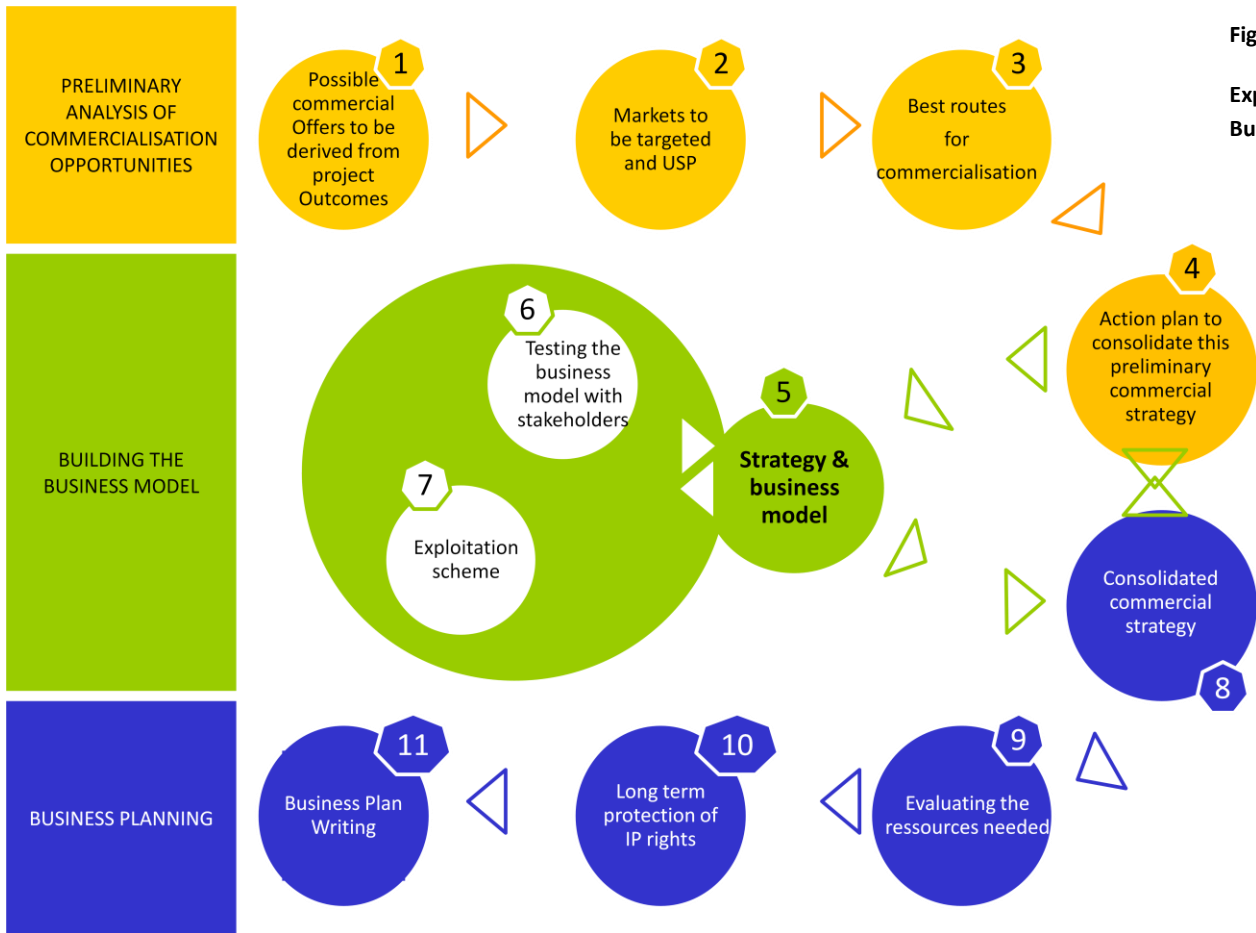


is aimed at *BUILDING THE BUSINESS MODEL* through which you will get revenue from your project outcome.



consists in *BUSINESS DEVELOPMENT PLANNING*: the resources needed for commercial development will be evaluated and a concrete action plan will be proposed.

The ultimate goal of this approach is to be in the position to penetrate the market with a ***viable, trustworthy, stable and robust*** business model as quickly as possible after your GNSS R&D project completion.



**Figure 1:**  
**Exploitation Plan**  
**Building Process**

- **FIRST ROUND OF THE GAME:**

*PRELIMINARY ANALYSIS OF THE PROJECT  
COMMERCIALISATION OPPORTUNITIES ...*



1

## WHAT WILL BE THE POSSIBLE COMMERCIAL OFFERS TO BE SOLD FROM THE PROJECT OUTCOME

When commercializing satellite downstream applications, return on experience shows that several lines of revenues are likely to be considered.

For instance, the PTOLEMUS<sup>1</sup> consulting group identified 23 different routes for Location based service providers to make money:

*Sales of equipments & technologies*

*Sales of end- to- end applications to end-users*

*Sales of contents to third parties*

*A mix of them?*

**In your case, what are the various offer packages to be considered?**



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<sup>1</sup> 'Do you really mean business in LBS', PEGASE GNSS Venture Academy, 3 March 2010 by Laurent de Hauwere, Managing Partner PTOLEMUS Consulting Group,

2

## FOR EACH OFFER, WHAT MARKETS ARE TO BE TARGETED & WHAT WILL BE YOUR UNIQUE SELLING PROPOSITIONS?



### Targeted Customers for each of these offers

Who are my customers? Who are the customers of my customers? Do I know already their Key Customers' Values?

### Orders of Magnitude of Accessible Markets

Do I intend to capture an existing demand  
What is the order of magnitude of my total accessible  
Is the market growth potential high, medium or low?



or to create a new one?  
market in volume?



### Competitive environment

Who are the most direct leading competitors? Are there indirect competitors as well?  
What are the **Unique Selling Points** brought about by the project or by the partners' experiences?  
What are the differentiating factors of my product or service: Innovation? Performance? Cost advantage?

### Orders of Magnitude of Revenues to be generated

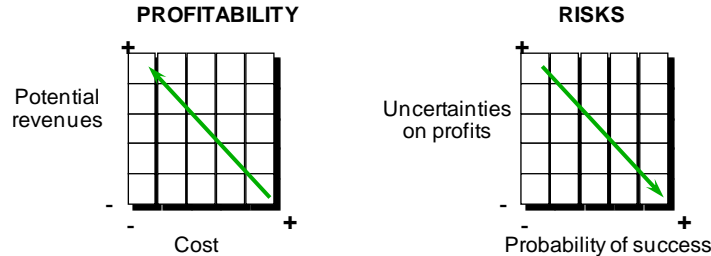
What is the most likely market share I could get? How is it likely to evolve over the next three or five years? Give an order of magnitude of 'Selling price' \* PROJECT expected market share \* Total accessible markets





## BEST ROUTES FOR COMMERCIALISATION

A first analysis of the advantages and disadvantages of each commercial scenario will help prioritize the various commercial routes. This analysis should be implemented also in terms of Risks versus Rewards.



For the commercialization scenarios which appear as being attractive enough, a first strategic analysis will be implemented by highlighting the Strengths and Weaknesses of the consortium face to the Opportunities and Threats of the Competitive environment.

S	W
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### Time to market is essential

What would be the ideal timeframe for commercializing the project's results?



Is the proposed planning coherent with the evolution of the competitive environment?

The commercial scenarii which appear as being the most promising need to be further analysed before the GSA funded project completion. What is the action plan to be implemented in order to consolidate further your project exploitation plan in the months ahead?

Which additional information need to be collected?

**If you know, recognize that you know,**

**If you don't know, then realize that you don't know**

**Then, Decide what to Do: Say what you Do and Do what you Say**  
**Confucius**

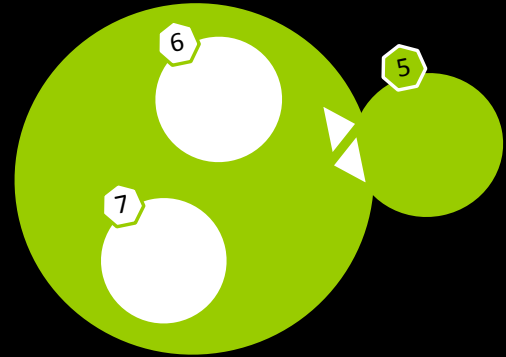
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- ✓ More detailed market segmentation and associated Key Customers' Values?
- ✓ Market trends and estimation of accessible market volumes
- ✓ Possible market shares?
- ✓ Possible business models and associated pricing strategies
- ✓ More detailed analysis of the competition

**Who will be in charge of collecting and disseminating the information among the consortium?**



- **SECOND ROUND OF THE GAME:**  
*BUILDING THE BUSINESS MODEL* ...

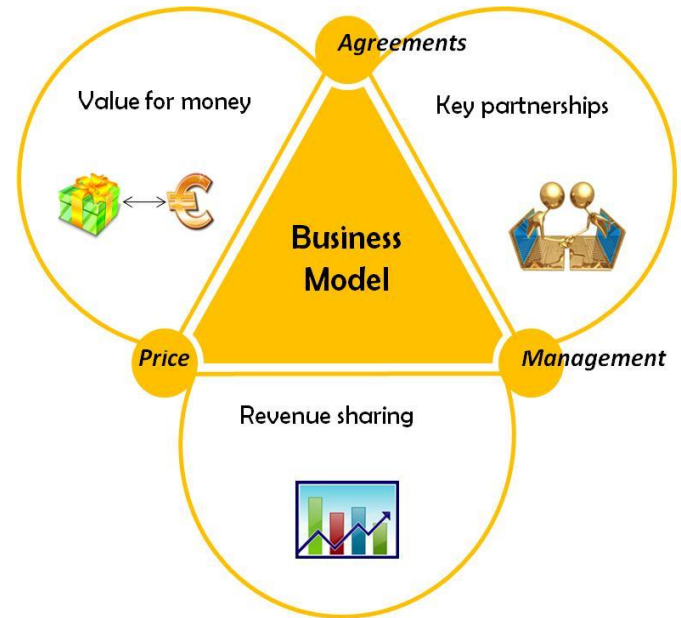


*A successful business model will extract a maximum value from the project results. This stage is at the core of the exploitation plan building process. A threefold approach will be implemented.*

**Value for money** – You will have to define how to make money in your GNSS application business.

**Key partnerships** – In the GNSS arena, companies usually need to build strong partnerships with a good number of other potential contributors.

**Revenue sharing** – The business model will be network-based: Each actor in the business (shareholder, supplier, technical or commercial partners) has to retrieve some benefit from its participation to the business.



## 1. Value for money – How to get revenue in exchange of the created value?

The return of experience shows that business models of many GNSS applications are multi-sided : Indeed, the revenues are not necessarily generated from the end-users which use the services but more and more indirect 'buy' effects from these end-users are also rewarded. As a result, several lines of revenues can usually be considered.

For the sake of illustration, the PTOLEMUS<sup>2</sup> consulting group identified 23 different routes for Location based service providers to make money. Let us mention below a few of them:

*Sales of equipments and technologies to the end users or to OEM*

*Sales of end-to-end applications to end-users:*

- Subscription based + sales of associated equipments
- Time based freemium ; Level-based freemium ; Download-based freemium
- Offer free mobile application with other paid-for products

*Sales of contents to third parties:*

- SMS target advertising ; Banner advertising ; Space rental on application platforms ;
- Use 'Users' as probes to generate contents which will be sold by other parties;
- Sales of raw data or statistics to 3<sup>rd</sup> parties;
- Use data generated to sell another product or to reduce your own data costs

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<sup>2</sup> 'Do you really mean business in LBS', PEGASE GNSS Venture Academy, 3 March 2010 by Laurent de Hauwere, Managing Partner PTOLEMUS Consulting Group,

## 2. Key partnerships – Building your network

In the GNSS arena, most of the applications are network-based.

You will certainly need to create or reinforce alliances. Who will be your critical partners?

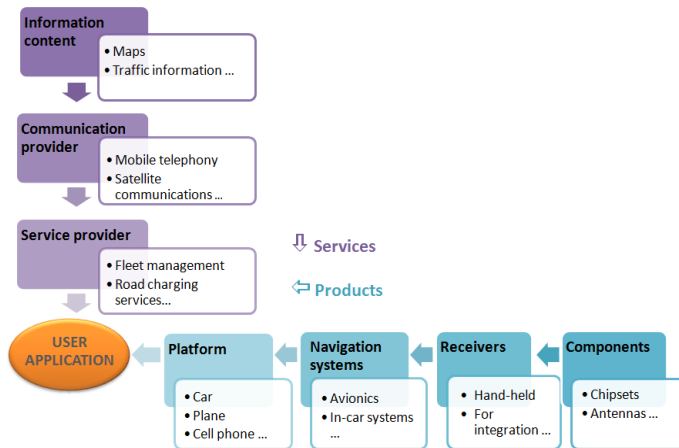


Figure 3: value chain for GNSS based applications.

- **Where are you in the value added chain?** Identify your position and target the gaps in terms of products and services providers.
- **What are the partnerships needed for accessing the market and selling your products or services?**
  - Upstream partners for secured access to satellite data? Telecom operators?
  - Service distributors with billing channels?
  - Data content providers to empower your GNSS application?
  - Complementary technology providers?

*Am I aware of their cultures and expectations?*

- **How to secure my network based business model?** What type of conventions and agreements are needed with my partners and clients?

### 3. How to build a network-based business model?

In order to be in the position to build the partnerships needed for your GNSS application offering, you will have to **demonstrate how your offer will generate value for the network of firms you want to collaborate with.**

By doing so, your business models will be necessarily **networked-based**: Value creation will be determined not only by your firm-level resources and aggregated competencies but more important, on how effectively and efficiently resources are combined at the network level. As a result, the overall rule of the game being will be to maximize the joint created value and to ensure its sharing among the network participants, so that each of them is better off than when they would leave the network.

#### ➤ Billing

To which party does the final customer purchase the GNSS service or product?

Which billing party is accepted by the final customer?

Could there be several types of billing channels?

#### ➤ Network- based Revenue sharing

Who creates the values in the value adding chain of the GNSS application?

How much does the creation of this added value cost to each player?

#### ➤ Proprietary revenue generators

What are my proprietary revenue generators?

How do they impact the revenue generators of the whole value chain, i.e. the price billed to the final end-users of the service?

Who should I bill my added-value to and how? (one-time cost/lump sum, flat rate, usage-based "pay-as-you-go"...)?

*Once a theoretical business model has been designed, its robustness will be evaluated with a panel of potential customers and partners.*

### Testing the market

The product / service and associated pricing scheme will be evaluated by meeting a significant number of potential customers. The “4P” marketing theory will be applied to conduct the test: Product, Price, Promotion, Place.

### Testing partnerships

The agreements and revenue sharing schemes to be implemented with potential partners will also be evaluated. You should be able to assess if the different types of partners are critical and how to manage the risk to share knowledge with them.



All right



Think twice...



Caution, risky !

Negative or uncertain conclusions shall lead the project holder to an iterative update of the business model.

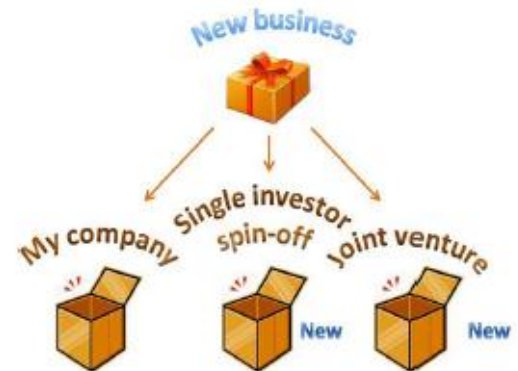


**COME BACK  
TO  
BUSINESS  
MODEL  
DEFINITION**

*It is now time to decide definitively which entity(ies) will be practically in charge of the business development of the new GNSS application.*

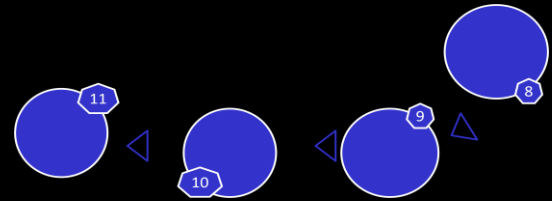
*Should the new activity preferably be integrated within one of the project partners' companies business development or instead, should a new entity be created specifically in order to run the innovative business? In that latter case, who will be the major shareholders?* The answer could be determined considering:

- **The synergies** to be identified between this new business and the activities already in progress within the various organisations of the consortium
  - ✓ in terms of image and marketing strategies
  - ✓ at the operational level on production resources standpoints
- **The level of risks associated with the new business development** (if the new activity is considered as being very risky, it will be wiser to isolate it within a dedicated organisational structure)



**Relevance of the consortium agreement:** A first Consortium Agreement was built at the beginning of the project. Is the sharing of the project outcome clear enough among the various partners? How will be the added value distributed among the PROJECT partners (royalties; obligation of subcontracts, ...)?

- **THIRD ROUND OF THE GAME:**  
*BUSINESS PLANNING* •••









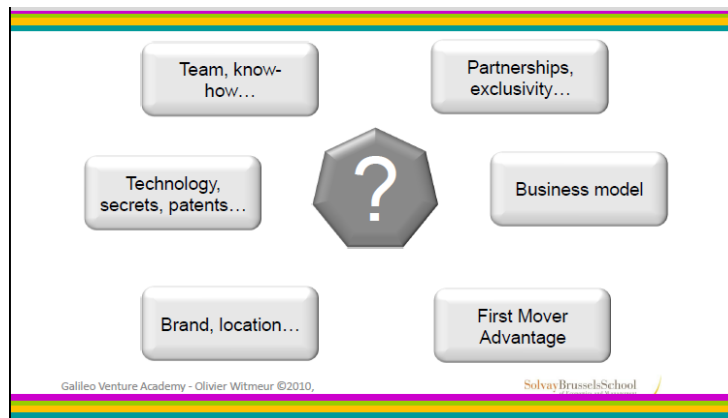
## CONSOLIDATED COMMERCIAL STRATEGY

*It is now time to consolidate your analysis with all your market search findings!*

*Indeed, you should now be able to assess your commercialisation strategy in details and to indicate clearly the quantitative ambitions to be targeted at middle and long terms:*

<p>Targeted Customers ,</p> <p>And their Key Customers' values</p> 	<p>Markets volumes and values &amp; associated trends</p> 	<p>Competitive environment</p> 	<p>Expected Revenues from the selected Business Model</p> 
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*And you should know as well what makes your Business (truly) Unique !*





## EVALUATING THE RESSOURCES NEEDED

*At this stage, you will have to assess the human, financial and production capacities needed for starting the commercial exploitation of your project.*

### Human resources



What is the adequate management team?  
What are the critical competences and profiles of leading edge experts needed?  
Where are such resources available?

### Technical resources

What are the equipment and other production / selling capacities needed?  
What is the associated investment and timeframe to be envisaged?



### Financial resources

What financial resources will be needed?  
Can you demonstrate high enough cash flow capabilities?  
Which are the possible leveraging effects for financing?  
Do you need to raise funds? loans or through equity ?



**Whenever possible, Search for Scalability, Growth and Speed**





***A formal or informal strategy could be adopted in order to protect your IP rights. Do not hesitate to ask for external IPR expert advice !!! What you should know at least:***

### **Soft law**

Or how to avoid too many problems...

- Contracts – non-disclosure agreements, non-competition clauses, agreements about the ownership of IPRs...
- Agreements on inventions created by employees – be careful, employees rights differ from one country to another

*More info about GALILEO IPR:*

*<http://www.qsa.europa.eu>*

*<http://www.galileoju.com>*

*Legal questions including IPR issues can be asked to:*

*[legal@qsa.europa.eu](mailto:legal@qsa.europa.eu)*

### **Best practices**

Internal processes to reduce risks

- Non disclosure (secret) and restricted access to critical information
- Reduce dependence on key personnel, reinforce staff commitment and loyalty
- Technical protection – secured access, encoding, etc.
- Fast innovation cycles – to maintain a time advantage
- Documentation – to reduce the risk of losing knowledge

### **Intellectual Property Rights**

Granted and recognized by the Court

- Patents – devoted to the industrial part of the innovation
- Utility models – designed to protect intellectual creation
- Copyrights – for the protection of non technical intellectual creations of authors
- Trademarks – to protect names and logos



**Publishing prevents formal protection !**

***Some additional advice to be considered from our IPR expert:***

***1. Not sure whether the innovation is protectable or not? Still at the beginning of your project? Do not hesitate to apply for a patent anyhow !***

- provides a proof of anteriority,
- gives a 12-month priority for patent application anywhere in the world,
- allows European companies to protect a service or process: apply in Europe and protect in the US !

***2. During the 12 month priority period, ask WIPO for a Patent Cooperation Treaty (PCT). It provides another 30 months***

- to decide the geographic perimeter of IP protection, depending on interests, risks and costs...
- to detect any killer application, at minimal costs, thanks to the search for anteriority,
- to finalise the product / service before final patent application.

*Having an ongoing application for patent can be enough to raise confidence towards banks or investors, to convince clients or to impress competitors...*

*... and good argumentation may keep the application ongoing for several years, although it is clear that the innovation will never be protectable.*



## BUSINESS PLAN WRITING



*The business plan should be understandable and attractive to any possible stakeholder. It will bring a clear, complete and concise picture of the business you want to go into while highlighting your key ambitions of development:*

*In which situation would you like to be in five years time to be in the position to say : ‘Yes, I have succeeded’ !  
What are the necessary intermediary milestones to be implemented to achieve such ambitions*

### Typical Business Plan Content

#### 1. Objectives of the project

- Strategic Background
- Ambitions of development
- Commercial offers
- Unique Selling Propositions

#### 2. Market analysis & competitive environment

- Targeted markets with growth potential
- Key Customers Values
- Competition
- Key partnerships

#### 3. Business model

- Value for money
- Business agreements and revenue sharing

#### 4. Actions plan to implemented & resources needed

#### 5. Management of Intellectual Property

#### 6. Financial analysis

- Revenues ; Investments & Costs ; Cash flow
- Funding needs

### What make the investors HAPPY !

- The problem or ‘the pain’ (must be obvious)
- Your solution (is unique and ready)
- Market size (is big)
- (A little bit on) Competition
- Business model (value creation is for sure)
- Team (is great)
- Achievements to date (are impressive)
- Credentials





## ACKNOWLEDGEMENTS

This Report would not have been possible without the essential and gracious support of all the experts who contributed to the GNSS Venture Academy organized with the GSA on 3 March 2010.

Without their care and consideration, this guidebook would likely not have matured.

Particularly, we would like to thank for their insights:

O. WITMEUR	SOLVAY Business Schools of Economics and Management
L. De HAUWERE	PTOLEMUS Managing Partner, Former Vice-President, Marketing, Aftermarket Sales & Business Operations at Tele Atlas
BL. SMITH	General Counsel Intellectual Property, EUROSPACE, Former IP Counsel, Alcatel Lucent World Corporate Headquarters
F. von DER DUNK	Director of Black Holes BV, Consultancy in space law and policy, University of Nebraska – Lincoln, USA
P. SLAATS	Director of Development of New Concept Gaming Limited, Former responsible for Vodafone-group long term LBS roadmap



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