

## Economic, Social and Environmental impact of the Alltech FEI World Equestrian Games™ 2014 in Normandy and their associated Territorial Project

Results in the short and in the long term

### SUMMARY OF RESULTS

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*This study was conducted by the French Institute for Horse and Riding (Ifce), the National Institute of Agronomic Research (INRA) and the Sports Economics and Law Centre (CDES) of Limoges, as part of a research partnership with the GIP Normandie 2014 and the local authorities of Normandy (Basse-Normandie region, Caen la Mer agglomeration, City of Caen).*

From August 23 to September 7, 2014, Normandy hosted the 7<sup>th</sup> edition of the World Equestrian Games. Nations registered hit a record with 64 countries represented. The show took place on several sites in Basse-Normandie: the main events were hosted in Caen (La prairie Racetrack, Exhibition Centre, Zénith and Ornano Stadium) but some events (sports or demonstration) took place in Haras National du Pin, Sartilly and Bay of the Mont Saint Michel, Pôle Hippique de Saint-Lô and Deauville Racetrack.



Games' organizational budget and number of people per stakeholders

**The aim** of this research project is to study economic, social and environmental short-term impacts but also to give long-term perspectives on the legacy of the Alltech™ FEI World Equestrian Games 2014 in Normandy and its associated Territorial Project (named 2014 WEG in this document, this term covering at the same time the sporting event and the associated Territorial Project).

**Short-term economic impact calculation** consists of measuring the net economic benefits of the 2014 WEG for the hosting area in comparison with a reference situation, i.e. the state of the local economy in the absence of the event. This evaluation is realized on two geographic scales: the Normandy region and Caen la mer agglomeration. It is based on the rehabilitation of the base theory and on Wilson's type multipliers.

The study of the **social profitability** is based on a quantitative and qualitative analysis. First, an analysis of the social profits coming from the event, based on the theory of the economic well-being, allow to monetize the created value. Secondly, the reasons why individuals give some value to these social profits are studied through a complementary qualitative analysis.

The **environmental impacts** are studied on the short term. They are estimated through various quantitative and qualitative indicators grouped in items (governance, partnerships and awareness raising; consumption of resources and emissions; natural environment and biodiversity). The objective is to estimate these various items impacting the environment through a specific unit for each item and to analyse these results considering the charge capacity of the natural environment. But especially, the analysis is centred on the actions set by the organizers to limit the environmental impacts on each of these items.

These three short-term approaches are complementary. They allow an overall study of the impact by assessing both the variation of activity, the variation well-being and the state of the environment.

**In the long-term**, the analysis allows us to formulate assumptions about the legacy of the event that are more about the medium term than the long term. This analysis takes place only two and a half years after the event and would have to be confirmed at 15 years' time after the event (in line with the objectives of the Territorial Project) to obtain a longer-term perspective. In this context, we are interested in the legacy of the 2014 WEG for the Normandy area, which represents in particular: cultural openness, image, local reputation, regional identity, synergies between actors, skills development, innovation, effect on local association, integration and social ties, citizenship, education, development and popularization of horse riding (discovering of the horse world of horses and equestrian activities, initiation, equestrian shows). We hypothesize that a more dynamic regional socio-economic environment will be created. The use of the creative class concept (Chantelot, 2010<sup>1</sup>; Florida, 2002<sup>2</sup>), during data processing, allows to analyse the evolution of human capital and to determine whether the 2014 WEG allowed to attract, create or develop some competences in Normandy (innovative, sources of creativity or networking). However, the low representativeness of our samples due to a small number of respondents implies that the results obtained have to be moderated. The analysis also concerns variations in population welfare, as well as the long-term impact on two sectors particularly concerned by this event: the equine and tourist sectors.

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<sup>1</sup> Chantelot, S., 2010. "Vers une mesure de la créativité : la construction de la classe créative française." Revue d'Économie Régionale & Urbaine, no. 3, p. 511-540.

<sup>2</sup> Florida, R., 2002. The Rise of the creative class: And how it's transforming Work, Leisure, Community and everyday Life. First Printing Edition. New York, NY: Basic Books.

**Data collection** is mainly based on:

- i) qualitative surveys among local experts (organising committee, local authorities) realized in 2014 before and after the event,
- ii) 1,946 surveys (see table below) realized during the event among all the present stakeholders (spectators, participants, accompanying people, employees, volunteers, exhibitors, food services, media),
- iii) 358 interviews (see table below) realized face to face or on the phone in 2014 before or after the event, with local inhabitants who didn't attend the event,
- iv) field data collection during the event,
- v) 51 interviews realized in 2015 by phone among local experts (20 from the equine industry and 31 from the tourist industry),
- vi) mail and phone exchanges at the beginning of 2017 with other local experts,
- vii) a thorough literature review (statistic resources on the internet, reports, articles, etc.).

These data have been analysed through quantitative and/or qualitative methods. It is important to note that these results relate to a given moment (things will continue to evolve) and are based on the data that we were able to collect at that moment, which are non-exhaustive.

Quantitative surveys	Spectators	Participants and accompanying people	Exhibitors and food services	Employees et volunteers	Media	Local population	Total
Number of usable investigations	1,251	258	170	258	9	358	2,304

### Organizational budget of the Games and the associated Territorial Project (TP):

<b>Total organizational budget</b>	Total organizational budget (Games and TP)	€81,980,000
	- included Territorial Project organizational budget	€4,000,000
	- included Games organizational budget	€77,980,000
<b>Games organizational budget</b>	- included public funds	€38,531,000
	- included private funds	€39,449,000
<b>Detail of government revenue invested in the event organization</b>	State	€10,000,000
	Région Basse-Normandie (region)	€15,177,000
	City of Caen ( <i>included €1,354,000 provision</i> )	€3,854,000
	Caen-La-Mer agglomeration (local authority)	€3,000,000
	Conseil Général du Calvados (local authority)	€3,000,000
	Conseil Général de l'Orne (local authority)	€1,500,000
	Conseil Général de La Manche (local authority)	€1,500,000
Région Haute-Normandie (region)	€500,000	

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# I. Descriptive statistics on respondent stakeholders

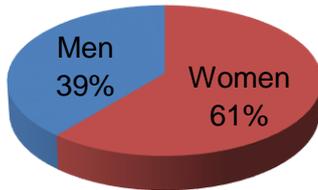
## 1- Spectators

313,556 SPECTATORS

1,251 SURVEYS

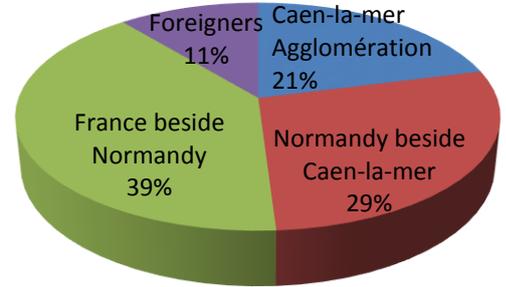
### PROFILE

Respondents average age: **44 years old (yrs.)**



- 21%** retirees
- 10.8%** equine industry professionals
- 46.6%** amateur riders and/or horse experts
- 25.6%** novice with one (or more) rider(s) in the family
- 16.9%** novice with no rider in the family

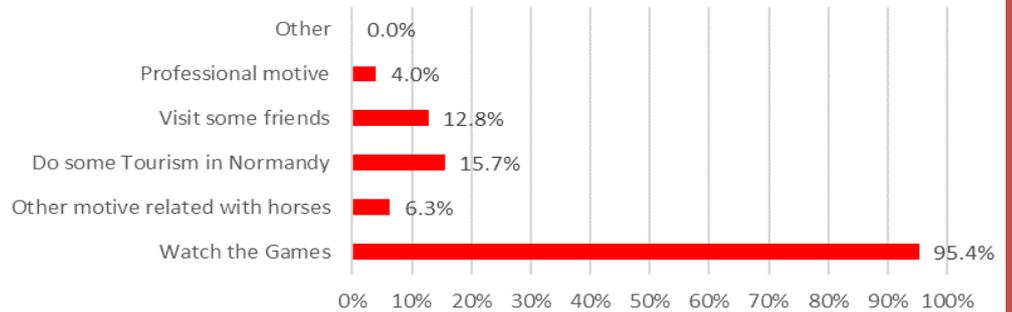
### ORIGIN



### REASONS FOR COMING

- 50.3%** live in Normandy
- 38.8%** People travelled specifically due to the Games
- 2.6%** People who would have come to Normandy at the same date anyway
- 8.3%** People who would have come to Normandy at another date

Reasons for spectators' travel:

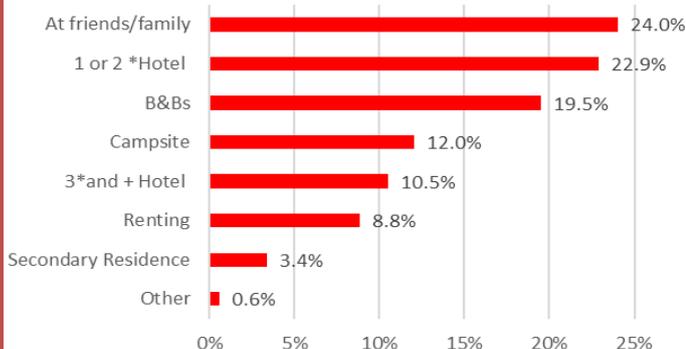


### OVERNIGHT STAY<sup>3</sup>

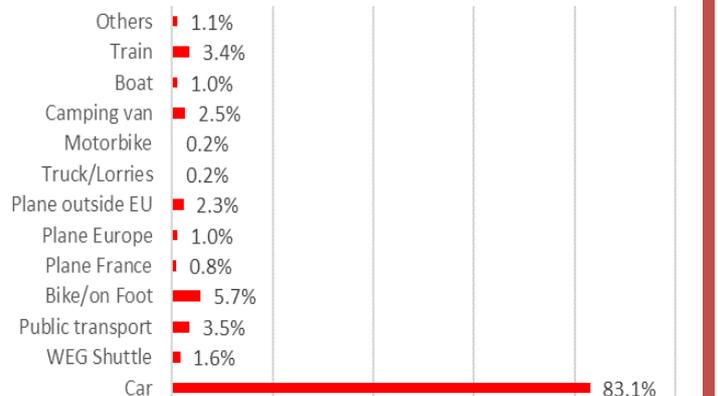
- 3 days** on site
- 2.3 nights** out-of-home
- 4.9 meals** eaten in Normandy

- 80% family trip** for spectators
- 456.9 km** travelled from main residence

Spectator accommodations



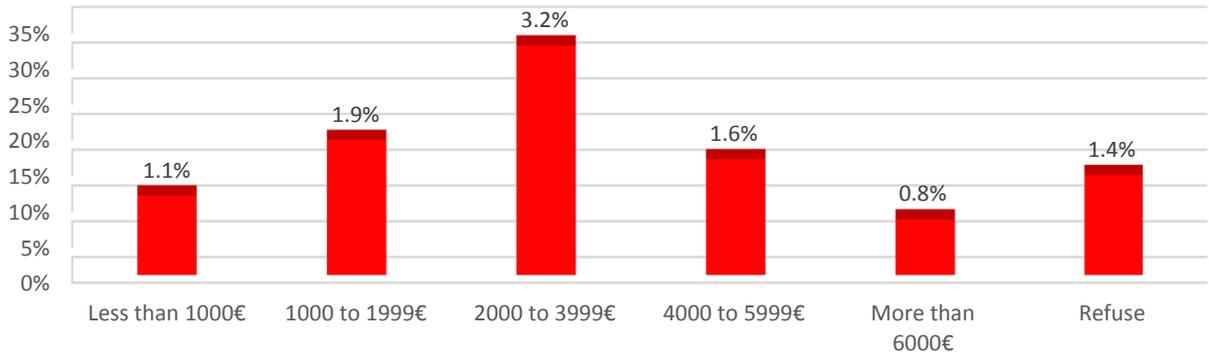
Transport mode used from main residence



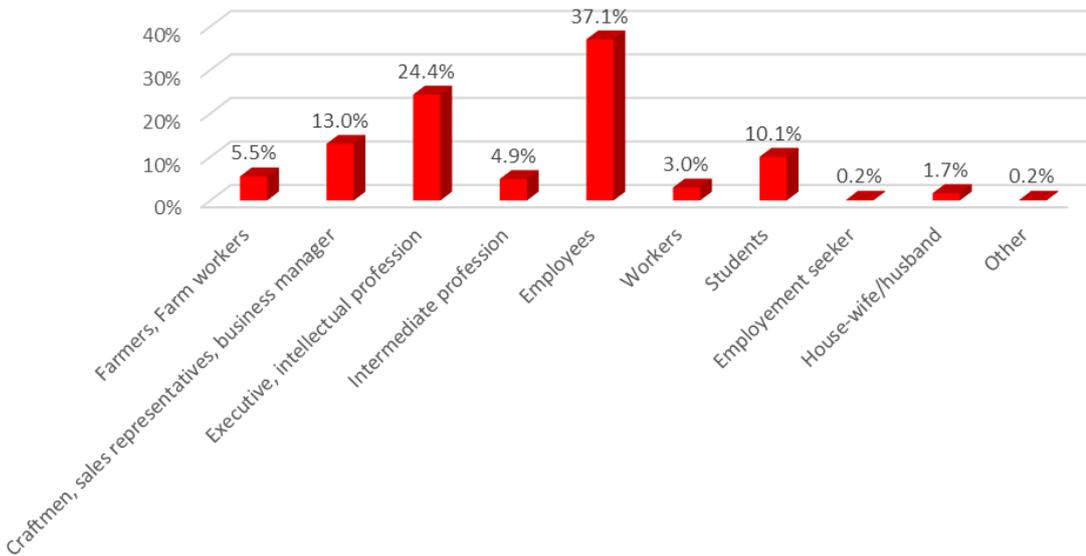
<sup>3</sup> Overnight stay results on different stakeholders only comes from surveys answers. It includes answer from people living or not in Normandy.

# MONTHLY INCOME

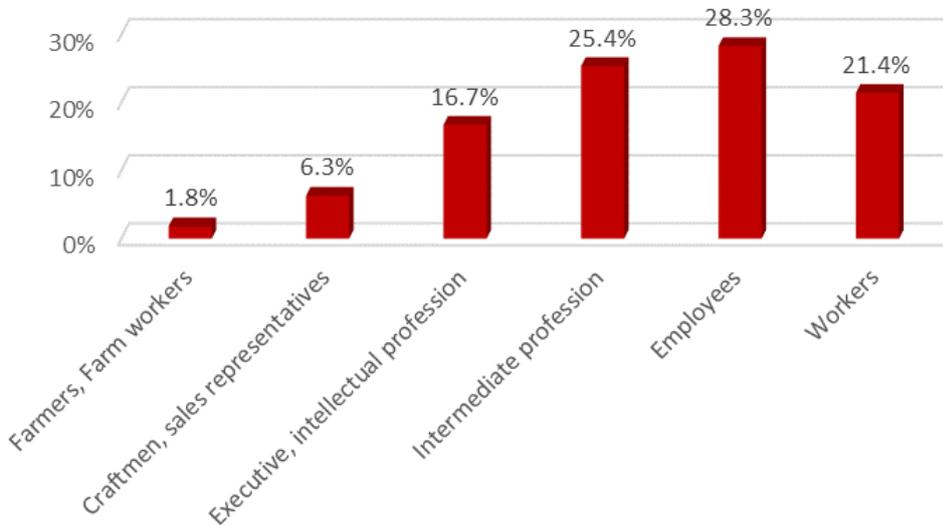
Household's net monthly income



# SOCIO-PROFESSIONAL CATEGORIES



French population socio-professional categories in 2011 (INSEE)



In comparison to national averages, the Games attracted more farmers, craftsmen, businesses managers, higher managerial and professional occupations than workers and intermediate occupations.

## 2- Participants and accompanying people

1,060 PARTICIPANTS  
2,968 ACCOMPANYING PEOPLE<sup>4</sup>  
258 SURVEYS

### PROFILE

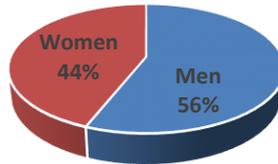
#### Interviewed people:

- 34.1% Participants
- 16.5% Grooms / assistants
- 12.9% Family members / Participant's friend
- 10.2% Trainers
- 8.2% Veterinaries / Farriers
- 5.5% Competing Horses owners
- 4.3% Team Leader
- 2.4% Mission leaders
- 5.9% Other kind of people

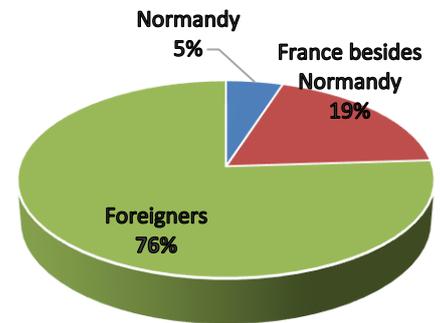
Respondents Average age:  
**40 years old (yrs.)**

4% retirees

2.8 accompanying people per participant



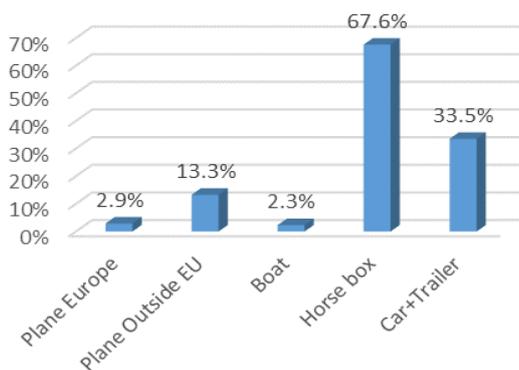
### ORIGIN



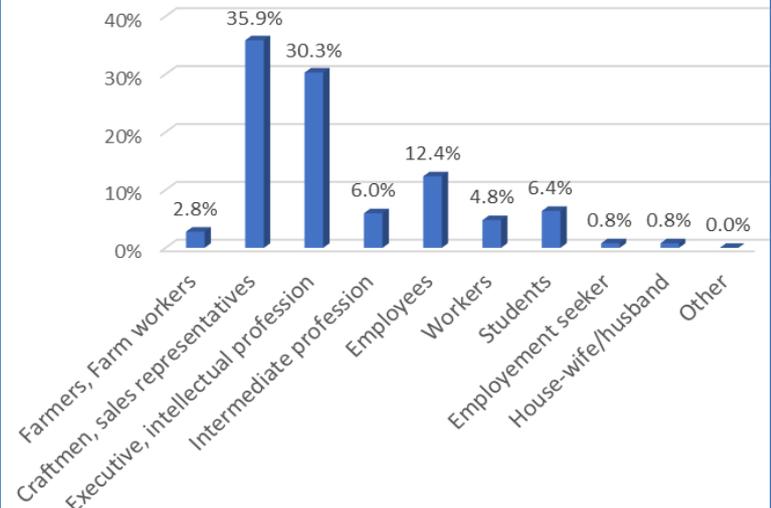
### HORSES

1,235 competing horses

#### Horses' means of transport



### SOCIO-PROFESSIONAL CATEGORIES

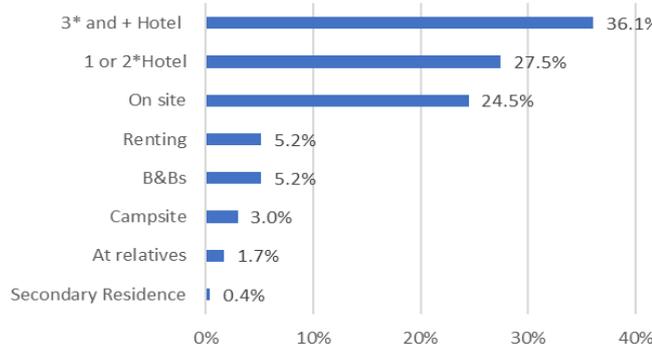


### OVERNIGHT STAY

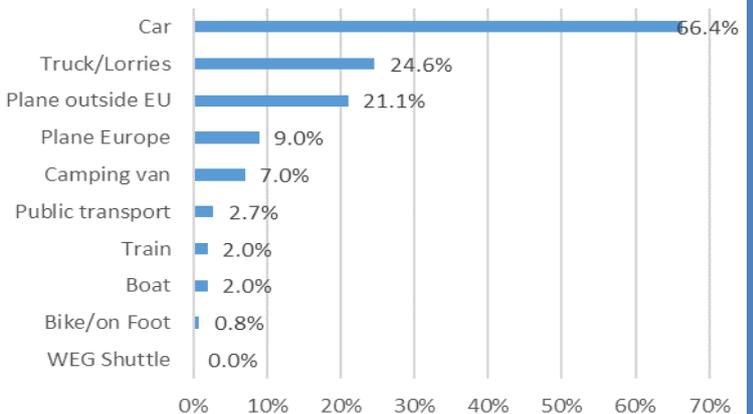
- 8.4 days on site
- 7.9 nights out-of-home
- 16.6 meals eaten in Normandy

- 2,621 km travelled from main residence

#### Participants and accompanying people accomodation



#### Transport mode from main residence

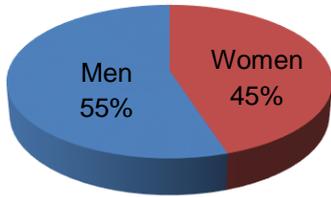


<sup>4</sup> Accompanying people are people who came with the participants: family, friends, grooms, assistants, trainers, veterinaries, farriers, Team leader, mission leaders, horses' owners...3\* and

# 3- Exhibitors and food services

3,416 EXHIBITORS  
1,224 FOOD SERVICES  
170 SURVEYS

## PROFILE



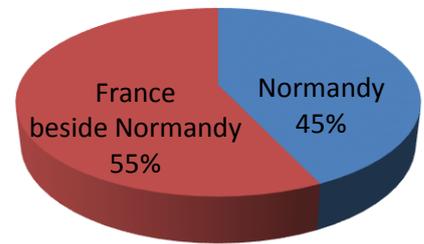
Respondents average age: **37 yrs.**

**1%** retirees

**13 people** working in average on the same stand

Average daily turnover: **1,722 €**

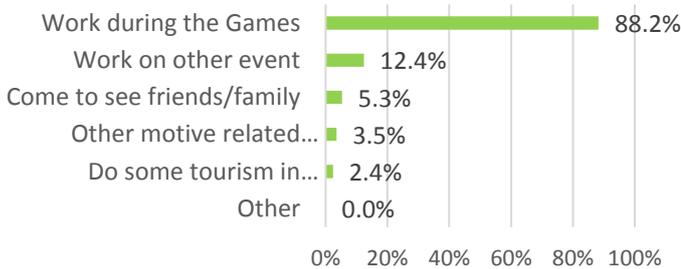
## ORIGIN



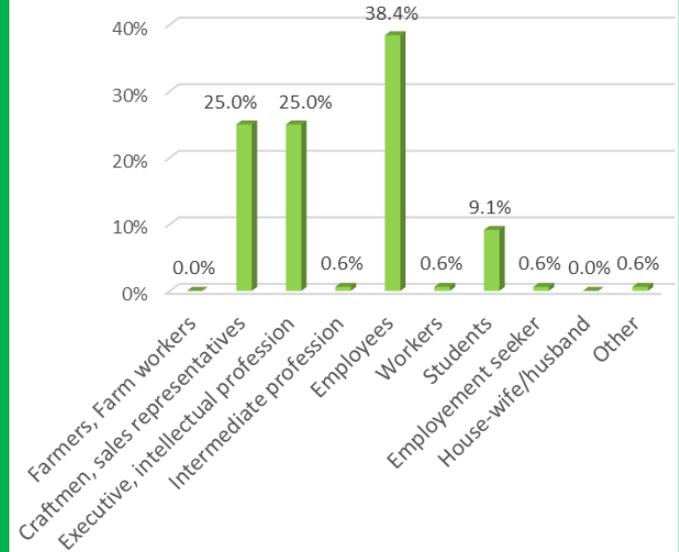
## REASONS FOR COMING

- **44.8%** live in Normandy
- **46.5%** People travelled specifically due to the Games
- **3.5%** People who would have come to Normandy at the same date anyway
- **5.2%** People who would have come to Normandy at another date

Exhibitors and food services reasons to come in Normandy



## SOCIO-PROFESSIONAL CATEGORIES



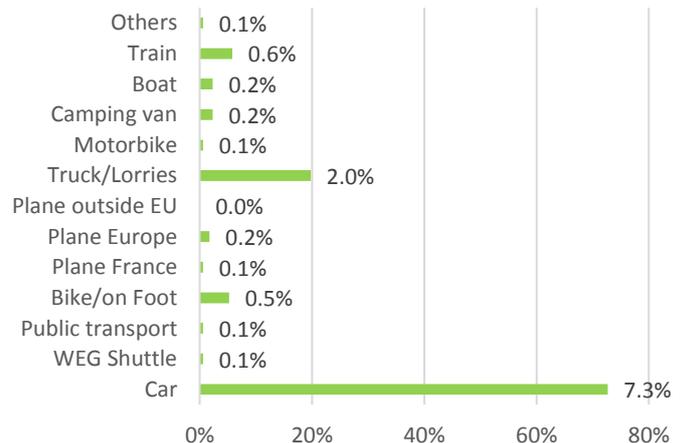
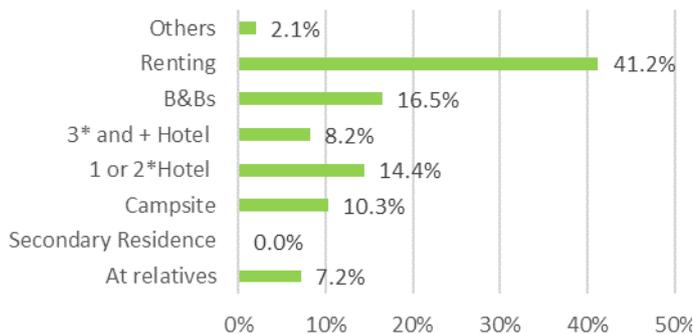
## OVERNIGHT STAY

- **12.5 days** on site
- **6.6 nights** out-of-home
- **21.7 meals** eaten in Normandy

- **455.3 km** travelled from main residence

Exhibitors and food services' means of transport from main residence

Exhibitors and food services Accomodation

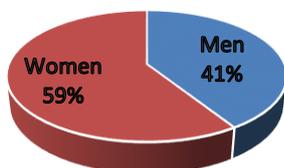


# 4- Employees and Volunteers

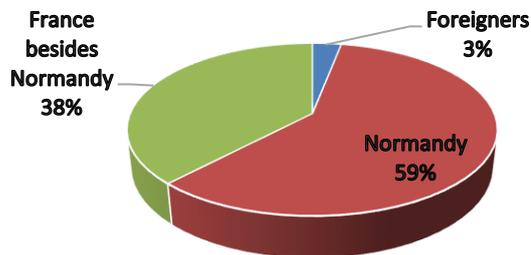
7,200 EMPLOYEES  
3,722 VOLUNTEERS  
258 SURVEYS

## PROFILE

Respondents average age: **36 yrs.**  
**19%** retirees



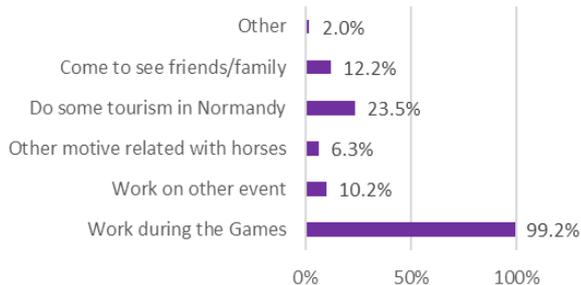
## ORIGIN



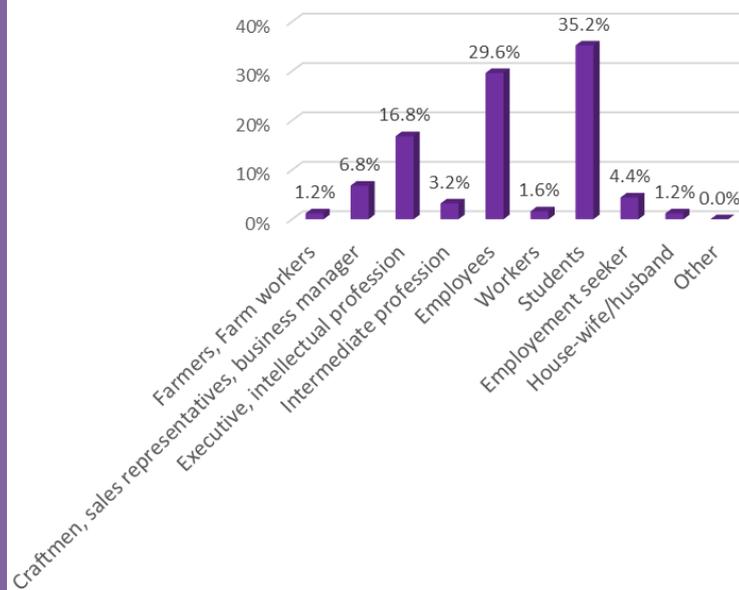
## REASONS FOR COMING

- **58.5%** Live in Normandy
- **36.8%** People travelled specifically due to the Games
- **2.0%** People who would have come to Normandy at the same date anyway
- **2.7%** People who would have come to Normandy at another date

Employees and volunteers reasons to come in Normandy



## SOCIO-PROFESSIONAL CATEGORIES

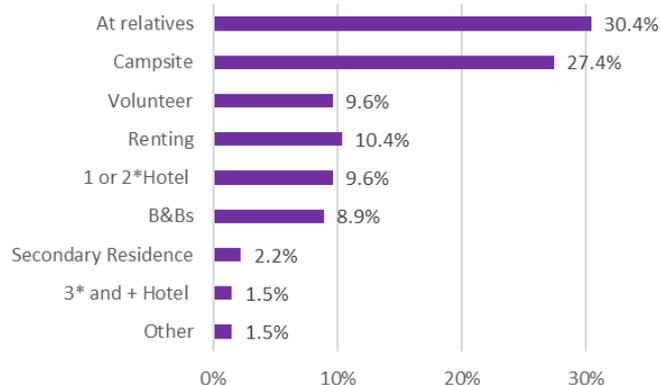


## OVERNIGHT STAY

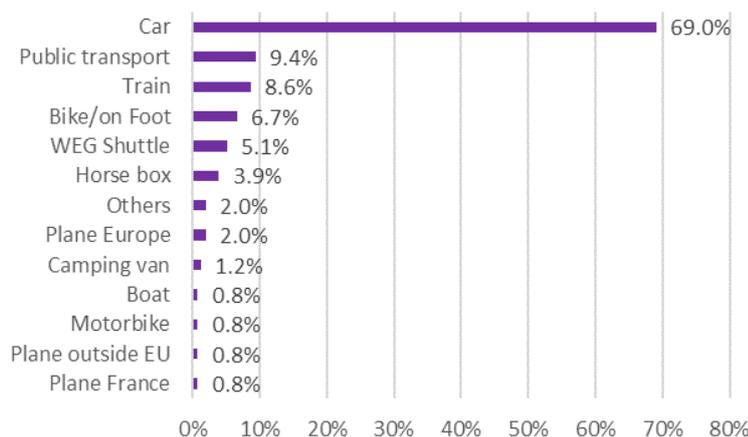
- **13.2 days** on site
- **6.5 nights** out-of-home
- **21.4 meals** eaten in Normandy

- **290.5 km** travelled from main residence

Employees and volunteers accomodation



Employees and volunteers means of transport from main residence



## 5- Medias

1,751 MEDIA WORKERS

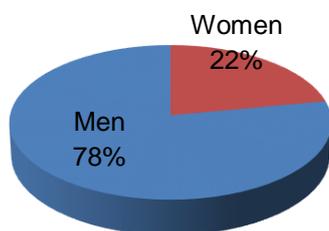
9 SURVEYS

### PROFILE

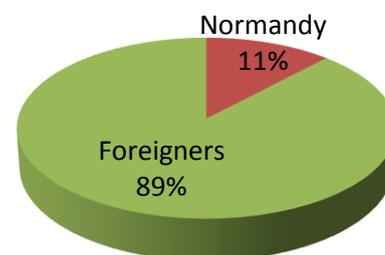
Respondents average age: 43 yrs.

Medias surveyed:

- Sportcal
- Magazine and web site "The Chronicle of the Horse"
- Het Laatste Nieuws
- Elite equestrian magazine
- Rider Revue International
- Al-Shark
- El Watan
- The Telegraph
- Horse actu.fr



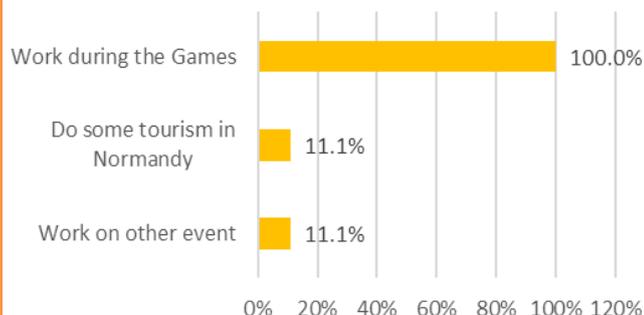
### ORIGIN



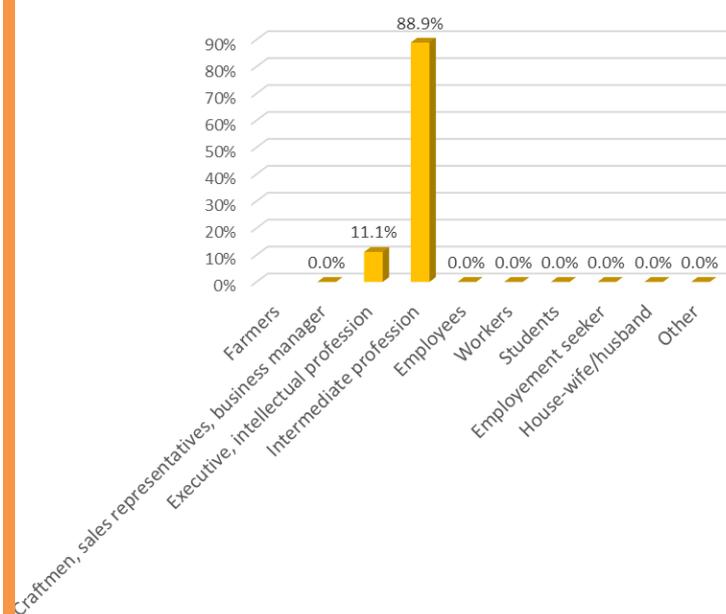
### REASONS FOR COMING

- 11.1% Live in Normandy
- 77.8% People travelled specifically due to the Games
- 0% People who would have come to Normandy at the same date anyway
- 11.1% People who would have come to Normandy at another date

Medias reasons to come in Normandy



### SOCIO-PROFESSIONAL CATEGORIES



### AVERAGE OVERNIGHT STAY

11 days on site

6.6 nights outside-of-home

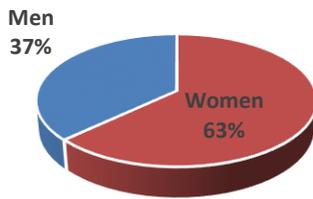
### SURVEYED MEDIA ROLE IN THE GAMES

- 38 actuality pages (paper and web) dedicated to the Games per media
- The Games represent 45% of sports programs / sports pages during the event period
- The Games represent 33% of programs/pages' total during the event period
- 3 medias out of 9 issued one or several special editions on the Games
- 3 medias out of 9 believe that the Games will change medias' perception of horses and riding (reasons: greater interest for horse riding following national teams victory/ negative image due to organisational problems)
- On long term, no journalist thinks that following the Games his media will have a greater interest in the horse world

## 6- Local population

3,268,020 NORMANDY INHABITANTS  
358 SURVEYS

### PROFILE



Respondents average age:  
**51.1 yrs.**

**75.7 %** born in Normandy

**0.3%** Professionals from the equine industry

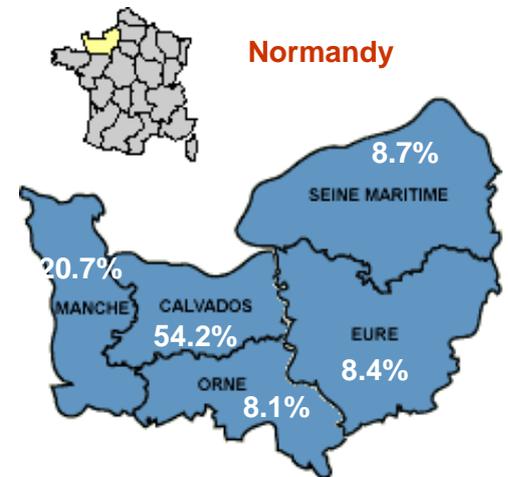
**14.6%** amateur riders and/or horse experts

**29.3%** novice with one (or more) rider(s) in the family

**55.8%** novice with no rider in the family

### ORIGIN

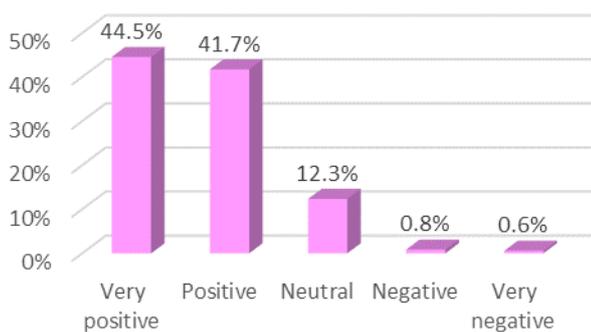
OF SURVEYED PEOPLE



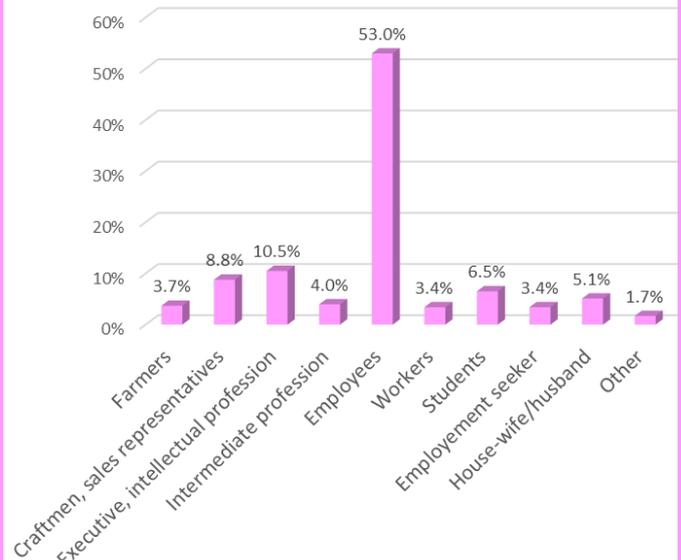
### RELATION WITH THE GAMES

- **93%** people knew about the event before the survey
- **25.5%** people had one or several family members who attended the Games
- **48.2%** people followed the Games tests or results in the media
- **52.1%** people wished they attended the Games but didn't (no more tickets available, absent, not available or lack of time, didn't know about it, ticket price, distance, too old, kids too young, sick)

How welcoming in Normandy the 2014 WEG is viewed by the respondents

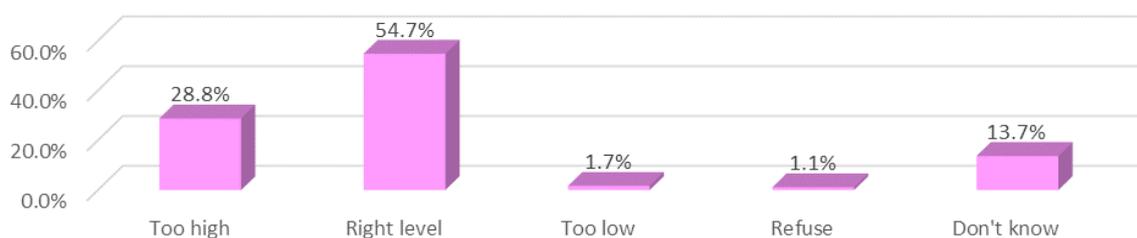


### SOCIO-PROFESSIONAL CATEGORIES



We surveyed more SPC of farmers, craftsmen/businesses/business managers, employees and less intermediate occupational and workers compared to regional averages

### Respondents' concerning the amount of the public subsidies given to the event



## II.Short-term economic impact evaluation

### 7- Different stakeholders' expenditures

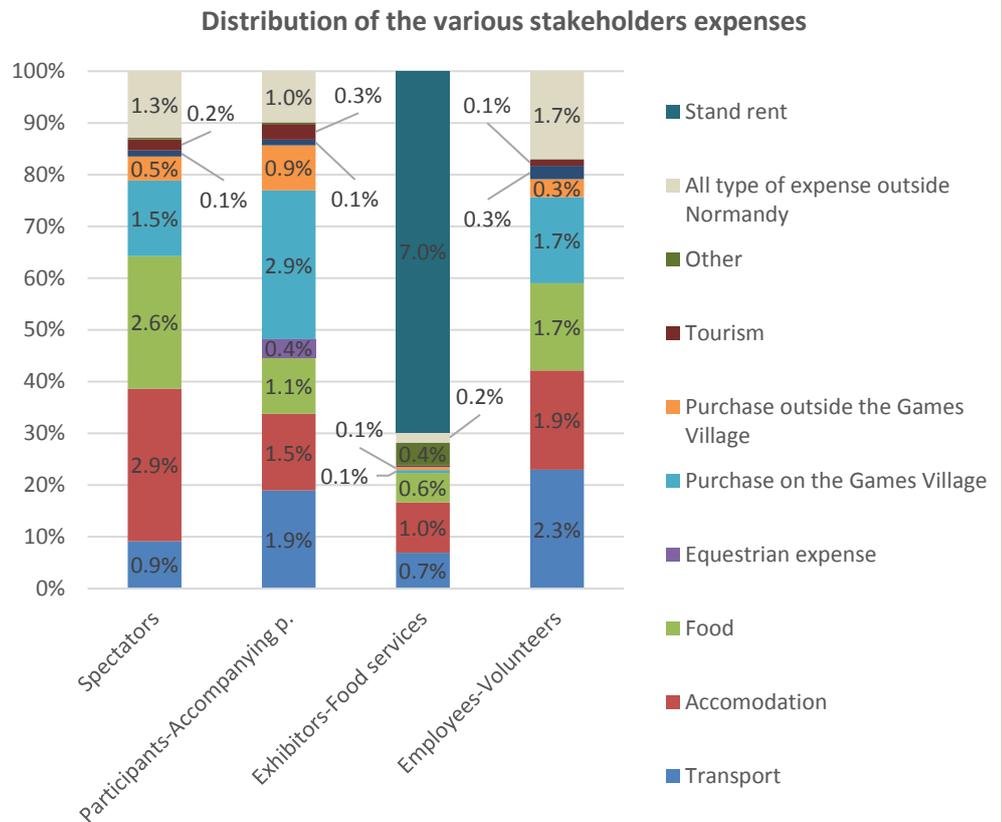
Average expenditure for the whole stay:

**€170 /spectator**

**€901 /participant-accompanying people**

**€2168 /exhibitor-caterer**

**€201 /employee-volunteer**

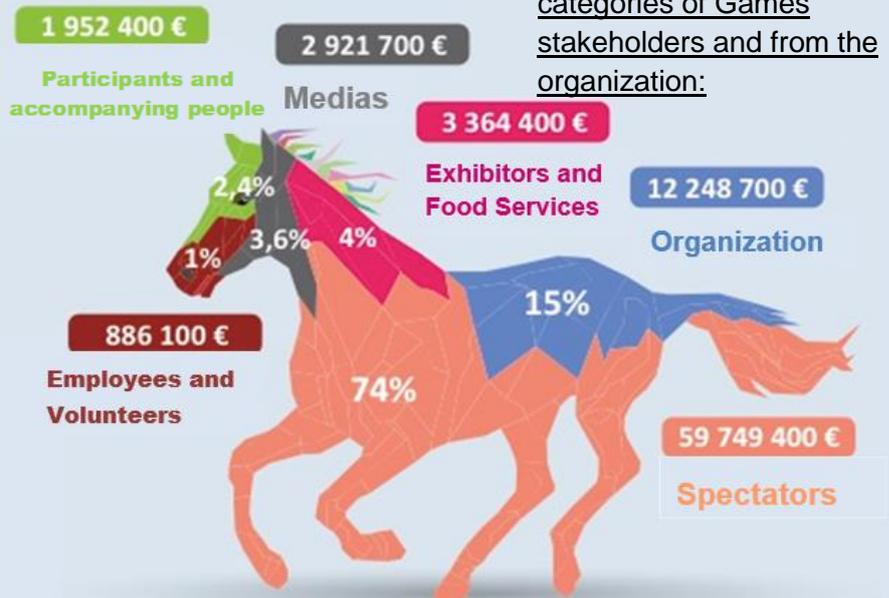


### 8- Gross spending

The gross spending is different from total expenditures. The expenditure constitutes an income only as far as they emanate from agents from outside the studied area and benefit agents who are a member of it. For example, for the studied area "Normandy" and the category "spectators":

- we consider the expenditure realized on the Normandy area by individuals living outside of Normandy and who came at least partially for the Games,
- and the Norman spectators' expenditures for Normans who would have gone on holiday outside the region if the event had not taken place

Gross spending from various categories of Games stakeholders and from the organization:



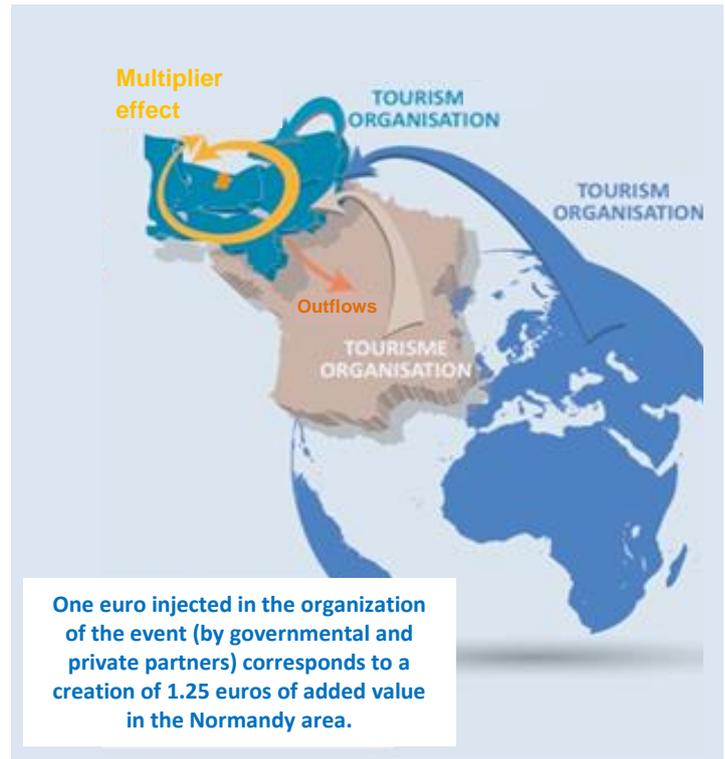
**TOTAL GROSS SPENDING FOR NORMANDY:**

**€81,122,672**

## 9- Economic impact

Studied area	Gross spending	Net spending	Total impact
Caen-la-mer agglomeration	€39,137,833	€27,546,257	<b>€50,803,897</b> (which we might add <b>4 million</b> for the Territorial Project funds)
Normandy region	€81,122,672	€46,038,308	<b>€102,255,177</b>

The economic impact of the Games for Caen-la-mer agglomeration reached 55 million euros for Normandy region. It can be defined as the net economic change for the event hosting area, in comparison with the situation that would have prevailed in the absence of the event. To consider all the spending and the monetary leaks on the territory, several stages are necessary: analysis of the event accounts, the counting of the present various stakeholders of the Games, the study of their expenses (made by respondents during the event) and the evaluation of the multiplier effect (Keynesian multiplier as Wilson) of the money that have been injected on the area. The methodology, now robust and thorough, was perfected year by year to minimize the errors and the classic limits of impact studies to obtain estimates as closely as possible the reality (considering coming motives, including all potential sources of impact, accurate precise estimation of stakeholder numbers, leaks deduction, with care to avoid the double counts and the substitution effects...).



**Gross spending** = Money which enters on the area through the event, comes from the outside and is received by internal agents of the area. Nevertheless, it does not benefit in its entirety to the agents of the territory.

**Net spending** = Share of gross spending remaining within the area  
 = Gross spending – outflows (money which goes out of the area because of local agents' expenditures outside of the area for the event)  
 = Gross spending X Studied area value-added ratio = Direct spending (expenses for the organization and profits generated by the show) and indirect spending (intermediate expenses made by companies to meet the needs of the show) of the event.

**Total impact** = Net spending + Induced effects (multiplier effect (or snowball effect), re-use of the money injected in the area thanks to the event, that is to say the money re-spent by the area's actors during several waves following the event) = Net Spending X Multiplier.

### III. Short term social impact evaluation

#### 10- Social utility monetarization

<b>Monetary value of social benefits</b>	<b>€44,715,350</b>
<i>Use value (for spectators)</i>	<i>€31,232,560</i>
<i>Non-use value (for local inhabitants)</i>	<i>€13,482,790</i>

*Using social profit analysis based on the well-being economic theory, the social utility is estimated. It allows to measure the individuals' earnings by using money as unit of measure. This monetarization concerns the use value and the non-use value.*

*The **use value** represents the utility perceived by spectators attending the event. Hence, it corresponds to spectators' satisfaction due to the consumption of the sports show.*

*The use value corresponds to the amount which the spectators would have been ready to pay (if forced to do it), rather than missing the show. It consists of the entry tickets amount and of the consumer's surplus. The total ticket sale amount raises €8,5 million. The consumer surplus was estimated at €22,7 million. The consumer's surplus is a global amount estimated from the demand curve for the event. This one is estimated thanks to the method of transportation costs. The basic idea is that the costs of the trip undertaken to go from home to the event site represent the main determiner of the event demand. Consequently, travel spending represents visitor's utility. From the observation of the visit rate per inhabitant for every zone beforehand determined, and by associating monetary values with the travelled distance (by calculating the cost of the trip based on the distance), it becomes possible to estimate a demand curve for the event.*

*The **non-use value** represents the value of the event, under monetary shape, by local inhabitants who didn't attend the Games. It can be positive or negative in case of nuisance caused by the event.*

*It is estimated using the contingent evaluation method. It appears through the inhabitants' willingness to pay or receive to keep the event on their area.*

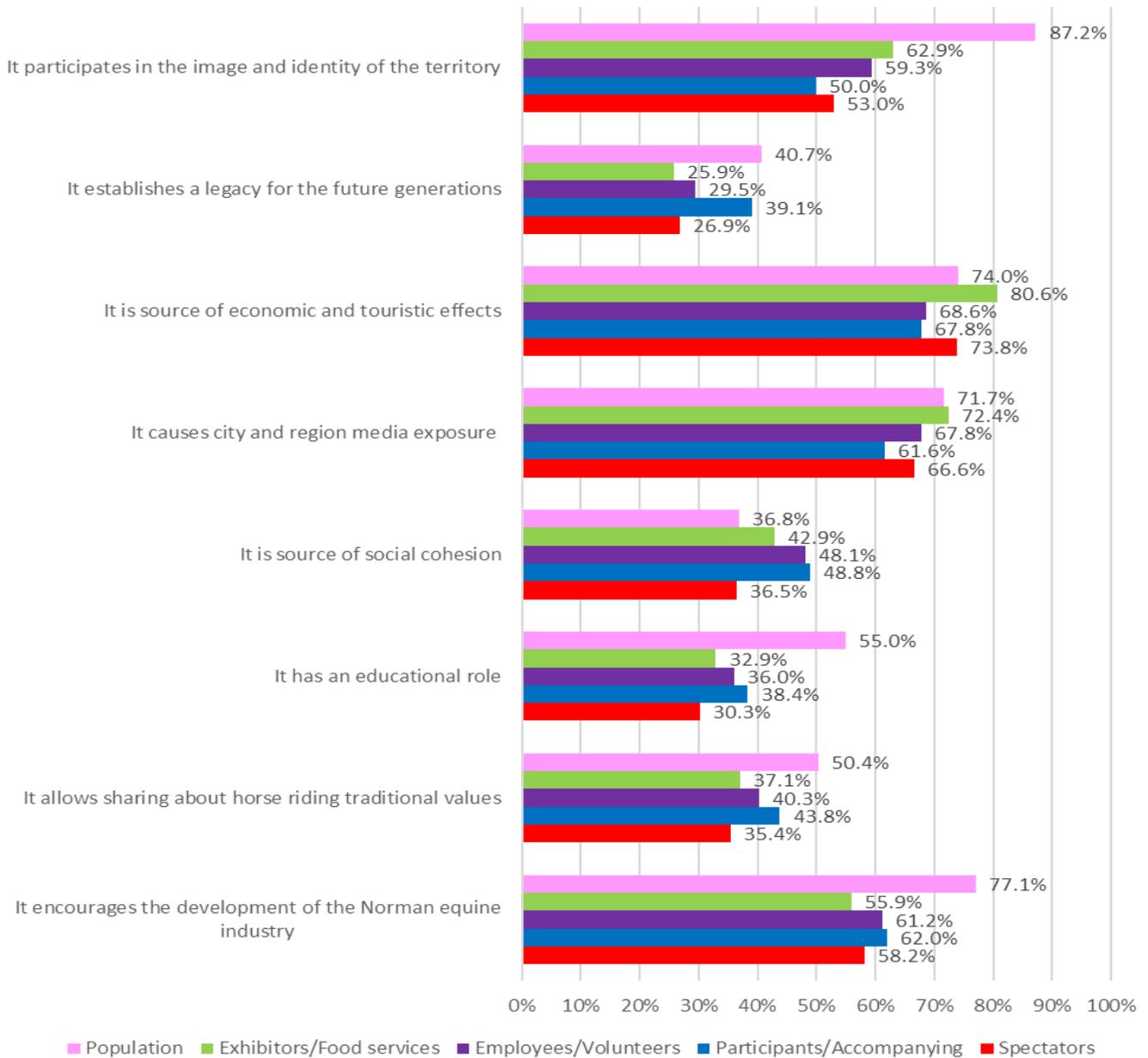
*The **total of the social profits** includes the use value and the non-use value. Its total amount raised 45 million euros. These profits must be put in balance with the costs of the event for the community. In the case of the Games, it corresponds to the costs of provision of the sporting and non-sporting infrastructure, the expenses due to the organization, the expenses of valorisation and the staff provision (see details of the budget of organization page 3).*

*These quantitative results are **completed by a qualitative analysis** (presented in the following part "qualitative aspects of the social utility"), which allows to understand what are the externalities (indirect effects not considered by the market), positive or negative that influence the opinion of spectators and local inhabitants and that are at the origin of the use and non-use values, and thus of the event social utility.*

# 11- Social utility qualitative aspects: why do the Games have some value in the eyes of the spectators and the population?

## NORMANDY'S BENEFITS

Opinion of the various stakeholders concerning the contributions of the Games for the Norman area (items proposed to them)



Globally, all the stakeholders agree to say that the 4 main contributions of the Games to Normandy are:

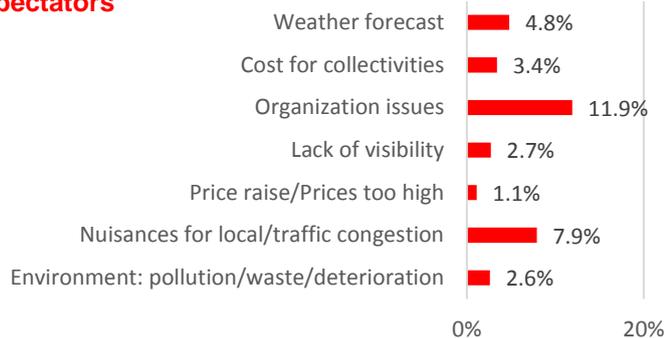
- economic and tourist consequences,
- media exposure of the City and the Region,
- development of the Norman equine sector,
- participation in the image and the identity of the area,

on the contrary to the social and educational effects are little mentioned.

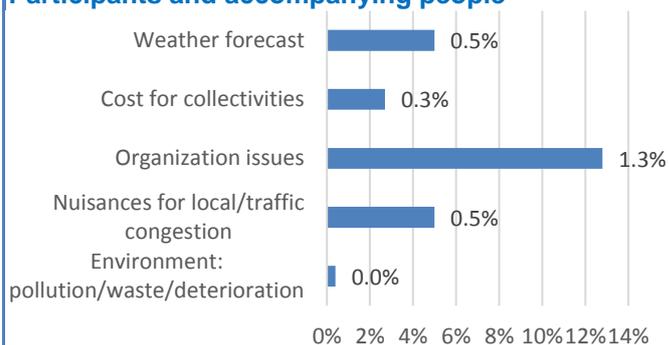
## NEGATIVES ASPECTS FOR NORMANDY REGION:

Different Games stakeholders' opinion about the Games' negative aspects for Normandy (spontaneous answers)

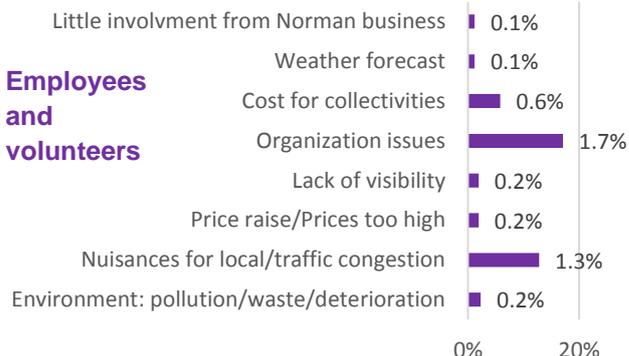
### Spectators



### Participants and accompanying people

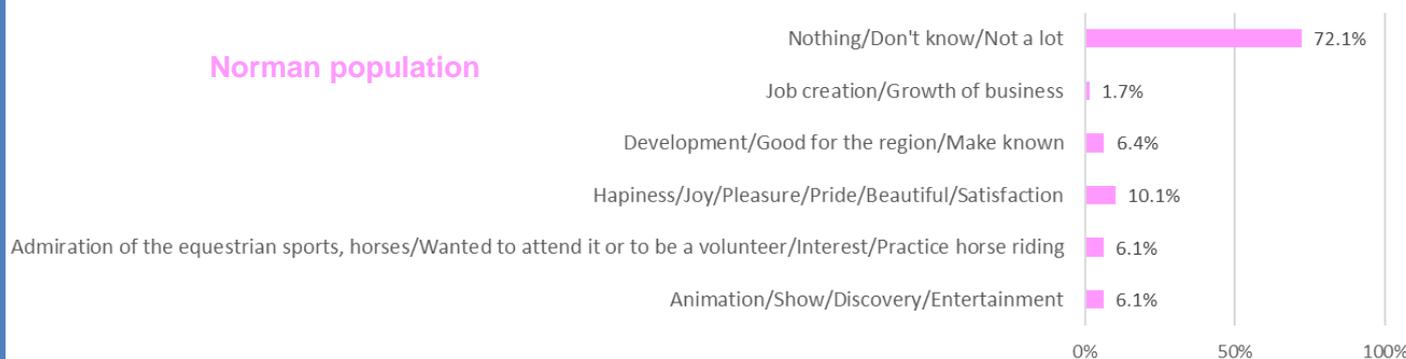
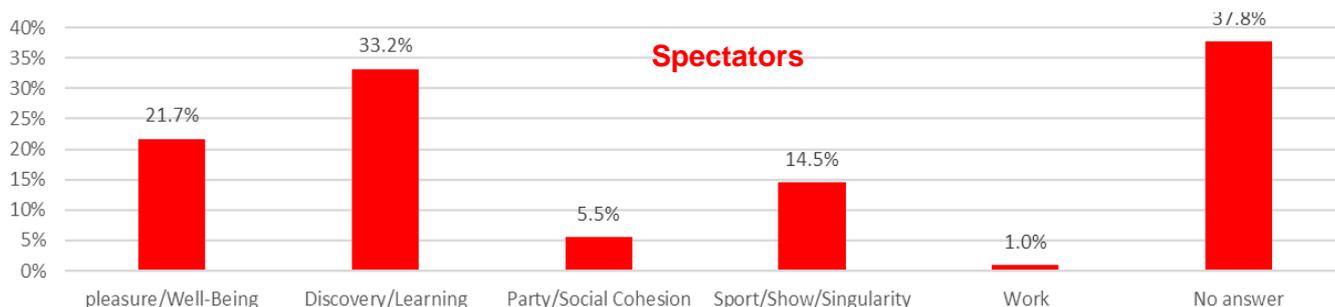


### Employees and volunteers



The organizational problems and the disturbances for the local inhabitants are the two most mentioned negative aspects of the Games. Organizational problems are further underlined by the employees/volunteers than by the exhibitors/food services than the spectators, participants and escorts, showing that these difficulties were felt more in house than its caused repercussions on the visitors. The nuisances for the inhabitants are less mentioned by the participants (who were not local inhabitants) contrary to a big proportion of every other categories of stakeholders.

## INDIVIDUAL BENEFITS: Spectators and local population opinion about what the Games bring to them personally (spontaneous answers)



## 12- Social measures set up by the organizers

The organizers of the Games set up several actions to maximize the social impact of the Games:

### **Diversification of the audience:**

- Diversity of offered price tickets with an average ticket price around €25 (price lists from €5 to €170),
- Opening of the event to a larger public thanks to the Territorial Project,
- School's implications in the organization of the event,
- Numerous activities offered on the Games' village (pony riding vaulting initiation, shows and demonstrations of various disciplines, demonstrations and explanations on the working horses' role, concerts...),
- Event accessible to people with reduced mobility.

### **Promotion of the local territory and horse riding:**

- Various stands, included the space of the Norman excellence, dedicated to Normandy area's promotion,
- Menus and Norman products were integrated into restaurants specifications for accredited people,
- Stands were partially intended for the promotion of horses (Chevaux à l'honneur: Horse breed in honour) and for the activities connected to horses (Hippolia, territorial horses, Alltech, blacksmith trade),
- The Organizing Committee (OC) supported several charities or foundations: Just World International, the Secours Populaire, the Petits Cracks and the Hippolia foundation.

### **Partnerships and contractual aspects:**

- Local partnerships were favoured as much as possible,
- An agreement with the State and Job centre was settled to encourage Games' service providers to employ Norman employees,
- The OC participated in skills development by offering qualifying internships to regional students and it accompanied its employees in fixed-term missions in their professional project after the Games, through a help for skills' valorisation,
- The OC partnership department created the official Support status, to allow dynamic Norman companies to take part in the Games. Six companies joined the team: Agrial, the Isigny-Sainte-Mère cooperative, Eiffage Travaux Publics, CWD Saddler, Vans Fautras and Equip'Horse.
- Creation of the Club Normandy 2014: club of Games' supporters for economic actors. It aims to give to the companies and their collaborators a unique and privileged opportunity to encourage, support and promote this event. It allows the members to be associated with the event in a privileged way, through a set of rights and advantages.

### **Safety and animal well-being:**

- Animal well-being was respected: sufficient size of stables, good and clean infrastructure, regular access to water of a known and appropriate water quality, appropriate horse food, animal controls and access to healthcare if necessary, disinfection of the stables in case of successive passages of various horses, access to areas of daily exit, quality of the equestrian grounds, technical level of the tests reaches, good work of the course designers and the officials,
- Organizers were accompanied by the RESPE (Network of Epidemio-surveillance in Equine Pathology) on the aspects of sanitary safety.

### **Sharing and skills:**

- the Sumbolon platform dedicated to the volunteer's accommodation allowed the realization of 887 overnight stays, this shows a Norman warm welcome and it was the opportunity to share experiences, cultures (foreign volunteers), etc.,
- Opportunity for the volunteers to share their passion for horses and riding with other volunteers, to acquire new skills and for some to create strong friendships,
- The Games allowed leaving a legacy for the equine sector, the technicians in all the domains are more hardened and, for example, other Endurance competitions are going to be organized on the site of Sartilly, and the Haras National du Pin is going to welcome from 2015, besides the Grand Complet, an advance class in eventing.

## IV. Short term environmental impact evaluation

### 13- Consumption of resources and emissions<sup>5</sup>

#### CONSUMPTION OF RESSOURCES

##### WATER



**458,579 m<sup>3</sup>**  
consumed  
(including 231,405  
m<sup>3</sup> on event sites)

i.e. the equivalent of the  
Caen-la-Mer agglomeration  
inhabitant's consumption  
(242,000 people) for 12  
days

0,091 m<sup>3</sup>/day per  
capita

##### ELECTRICITY



**30,246,573  
kWh**  
consumed  
(including 398 288  
on event sites)

i.e. the equivalent of a  
French household's  
consumption for 6,474  
years

6 kWh/day per capita

##### TRANSPORT



**787,727,107 km**  
travelled (transports,  
maintenance  
equipment, power  
generators and  
shuttles)

i.e. the equivalent of 5 times  
the distance between the  
Sun and the Earth

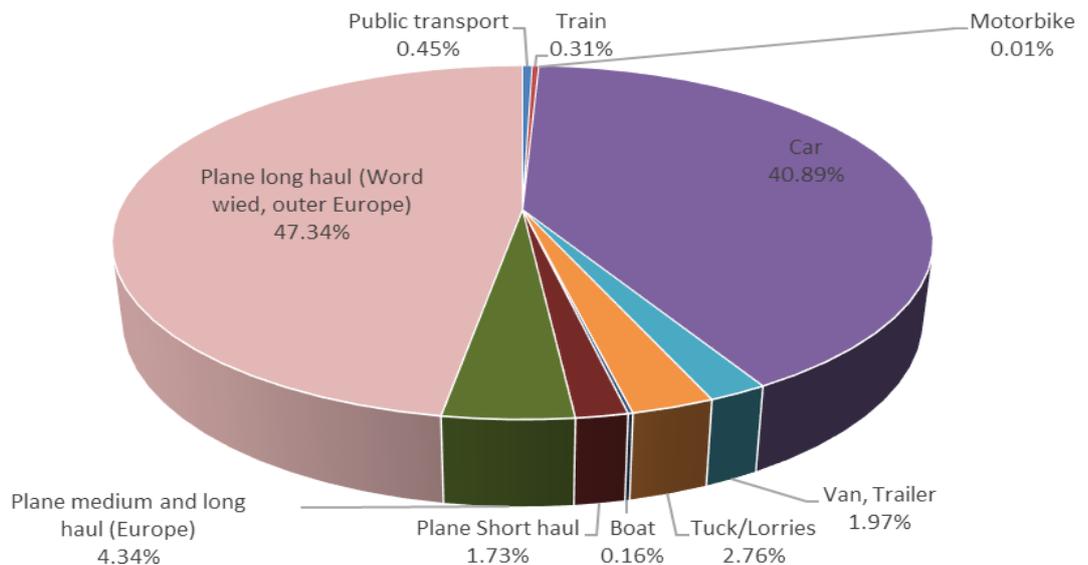
156 km/day per capita

**100,527 tonnes  
de CO<sub>2</sub> released**

i.e. the equivalent of France  
CO<sub>2</sub> emissions for 50 hours

19,9 kgCO<sub>2</sub>/day per  
capita

Percentages of  
CO<sub>2</sub> released  
quantity by all  
stakeholders  
depending on  
the type of  
vehicle:



<sup>5</sup> For all stakeholders.

## ANIMAL FOOD AND BEDDING



Supplied by the Organising Committee:

**100 tonnes** of straw (100% local)  
**22 tonnes** of hay (100% local)  
**135 tonnes** of shavings (0% local)

3.9 kg straw/day and per horse  
 0.9 kg hay/day and per horse  
 5.3 kg shavings/day and per horse

+ hard feed and sometimes hay brought by riders

## HUMAN FOOD



**2,038,970 meals** eaten in Normandy

On event sites:  
 16% organic  
 48% local  
 56% seasonal  
 71% remains thrown away

0.4 meal/day per capita

## ACCOMODATION



**1,062,338 nights** spent in Normandy (included 45% in Caen la Mer agglomeration)

*More than*  
**227,174 m<sup>3</sup>** of water

*And more than*  
**29,848,286 kWh** of electricity

3.2 nights per capita during the whole event period

## EMISSIONS

### MANURE



**534 tonnes**

100% locally recovered composting  
 i.e. the equivalent of one horse production for 41 years.

21.1 kg/day per horse

### WASTE



**278 tonnes**

i.e. the equivalent of 800 persons' consumption for 1 year

55.3 grams per day per capita

### EFFLUENTS



No impact on sewage treatment plants

**159 tonnes** of sewage handled separately (bilge water off-grid, routed to water treatment centre)

### NUISANCES

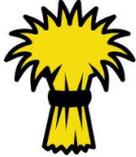


**7%** Norman inhabitants (and 15% of Caen's citizen) bothered  
**<1%** expect to be compensated  
**(14€** in average)

Traffic or congestion

No visual or odour nuisances

## CONSUMPTION OF RESSOURCES: QUALITATIVE ASPECTS

Stations	+	-
<b>Water</b> 	<ul style="list-style-type: none"> <li>- Good climate</li> <li>- Composting and chemical toilets</li> <li>- Devices for consumption reduction</li> <li>- Use of river and pound's water</li> </ul>	<ul style="list-style-type: none"> <li>- No recovery and of use of rainwater</li> <li>- No composting toilets on every site</li> <li>- No water spray (Endurance, Eventing)</li> <li>- Few communications about water savings</li> </ul>
<b>Electricity</b> 	<ul style="list-style-type: none"> <li>- Natural light preferred</li> <li>- No warm or cool air-conditioning</li> </ul>	<ul style="list-style-type: none"> <li>- No use of renewable energies</li> <li>- Few devices with low electric consumption and few reduction's plans of the consumptions</li> </ul>
<b>Transport</b> 	<ul style="list-style-type: none"> <li>- Incentive for carpooling, public transport and green types of travel</li> <li>- Shuttle system</li> <li>- Horse-drawn mobility (Hypomobility)</li> <li>- Eco-driving training</li> </ul>	<ul style="list-style-type: none"> <li>- No shuttle towards demonstration sites</li> <li>- Engine and vehicles used by organisation fairly energy consumer (very few electric cars)</li> <li>- Road signs not always clear</li> <li>- Many power generators used</li> </ul>
<b>Animal food and bedding</b> 	<ul style="list-style-type: none"> <li>- Leftovers from horses' hard feed and bedding reused, very few losses</li> <li>- Straw, hay and other feeds from local providers</li> <li>- Packaging of food and bedding in bundle or in bags</li> <li>- Straw consumption monitoring and horse dropping frequently removed</li> </ul>	<ul style="list-style-type: none"> <li>- Hard feed and shavings coming from Europe</li> </ul>
<b>Human food</b> 	<ul style="list-style-type: none"> <li>- Incentive to use of local and seasonal products by the restaurant owners of the village of the Games</li> <li>- Use of Ecocups, compostable dishes and ecological packaging</li> <li>- Choose of food services for accredited holder which is sensitive to reduce its environmental impact (waste recycling, size of portions, variety of meals among which vegetarians, used dishes ...)</li> </ul>	<ul style="list-style-type: none"> <li>- No incentive to use of organic products and low percentages used</li> <li>- Big part of the remains thrown away</li> <li>- All the food services are not local</li> <li>- Insufficient numbers of food services in HNP and in Sartilly</li> <li>- No measure to reduce the consumption of meat and fish</li> <li>- No several sizes of portions and collective conditioning unprivileged</li> </ul>
<b>Accommodation</b> 	<ul style="list-style-type: none"> <li>- Close accommodations prioritized for the national federations, accommodations on some sites for grooms and athletes</li> <li>- A link on the Games' website towards a list of accommodations and the platform Sumbolon for the volunteers</li> </ul>	<ul style="list-style-type: none"> <li>- No promotion or incentive for environmentally-friendly accommodation</li> </ul>
<b>Materials</b> 	<ul style="list-style-type: none"> <li>- Maximization of the use of eco-responsible materials and from local origin</li> <li>- Limitation of the paper supports</li> <li>- Reflection on the future of materials further to the games (rent, re-use, recycling)</li> <li>- Permanent Infrastructures and rents privileged</li> </ul>	<ul style="list-style-type: none"> <li>- All the materials are not eco-responsible and from local origin</li> </ul>

## EMISSIONS: QUALITATIVE ASPECTS

Items	+	-
<b>Manure</b> 	<ul style="list-style-type: none"> <li>- 100% of manure locally composted</li> </ul>	
<b>Waste</b> 	<ul style="list-style-type: none"> <li>- Recycling bins</li> <li>- Sites broadly clean</li> <li>- Team awareness</li> <li>- No smoking</li> <li>- Ecocup</li> <li>- A part of waste locally recovered</li> <li>- Limited number of plastic bottle used</li> </ul>	<ul style="list-style-type: none"> <li>- No recovery on overall waste</li> <li>- Composting or methanization not favoured</li> <li>- Insufficient number of bins</li> <li>- No recycling in Saint-Lô and Deauville</li> </ul>
<b>Effluents</b> 	<ul style="list-style-type: none"> <li>- Installation of composting and chemical toilets</li> <li>- No leakage to the environment</li> </ul>	<ul style="list-style-type: none"> <li>- Little communication on sites</li> <li>- Local sewage-treatment plants not contacted before the event</li> <li>- No composting toilet on every site</li> </ul>
<b>Nuisances</b> 	<ul style="list-style-type: none"> <li>- No smoking</li> </ul>	<ul style="list-style-type: none"> <li>- Traffic and carpark problems (especially in HNP)</li> <li>- Very few English-speaking volunteers</li> <li>- Insufficient Cleanliness of toilets</li> <li>- Sometimes long waiting times (entrances, restaurants)</li> <li>- No or few sheltered spaces and spaces to sit down</li> </ul>

## 14- Governance, partnerships and raising awareness

### GOVERNANCE



+	-
<ul style="list-style-type: none"> <li>- Working groups dedicated to the environment</li> <li>- Local partnerships favoured</li> <li>- EquuRES Event labelling of 5 stables</li> <li>- Good landscaped insertion</li> <li>- No sanitary crisis</li> <li>- No security problems</li> </ul>	<ul style="list-style-type: none"> <li>- No partnerships with structures showing strong environmental characteristics</li> <li>- No communication on actions carried out in favour of the environment</li> <li>- Event not labelled globally</li> <li>- No carbon approach</li> </ul>

## RAISING AWARENESS



Among the various stakeholders, **nearly half of the surveyed people cannot mention any environmental measure** set up by the organizers

Only 1.5 % of the individuals mentions more than 4 measures

+	-
<ul style="list-style-type: none"> <li>- Stands and visits on sustainable development theme</li> <li>- Recycling bins</li> <li>- Working horses</li> <li>- 40 projects financed by the Sustainable Development and Innovation Fund</li> <li>- Ecocup</li> <li>- Explanatory or of raising awareness posters</li> <li>- Communication on the types of travel</li> </ul>	<ul style="list-style-type: none"> <li>- Insufficient raising awareness of the equine sectors' professionals</li> <li>- Not much communication on the invisible actions</li> <li>- Lack of explanations in English and of adaptation to an international public</li> <li>- No "sustainable development" entertainers</li> <li>- No penalties for the noncompliance with the environmental protections rules</li> <li>- Few measures in favour of the environment companies through the Territorial Project</li> </ul>

## 15- Natural environment and biodiversity

### NATURAL ENVIRONMENT AND BIODIVERSITY

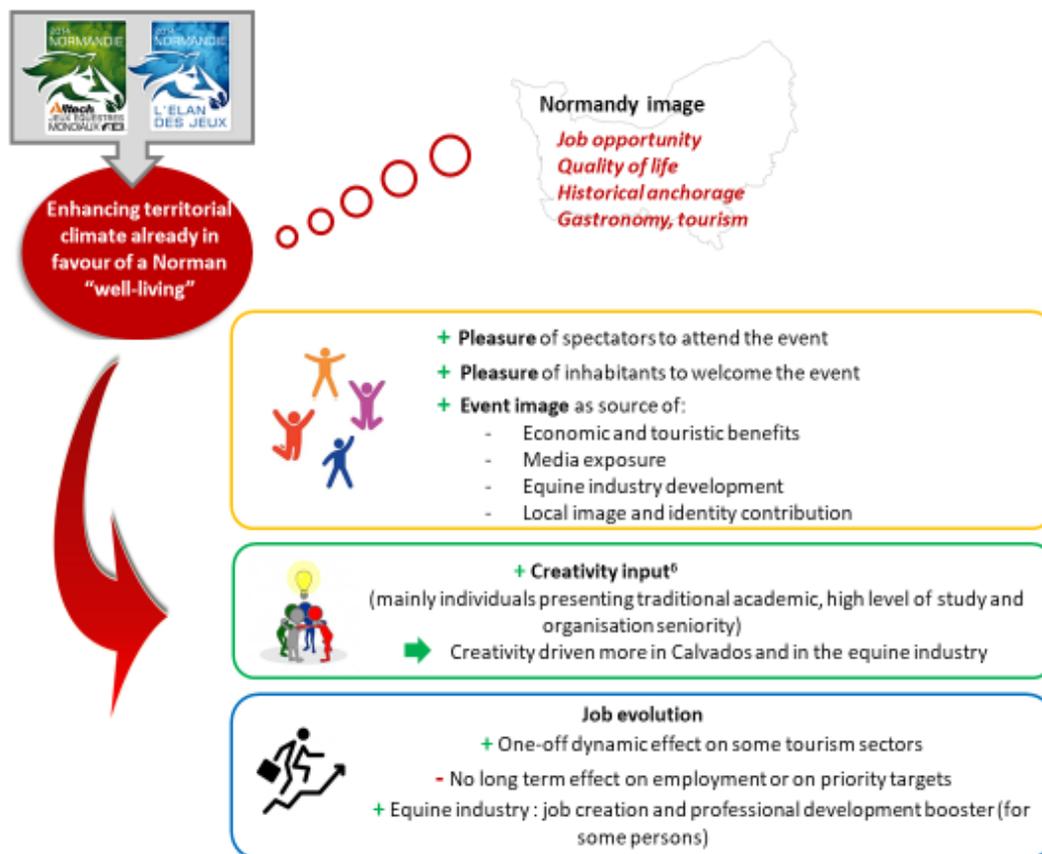


**500 ha** of surface occupied by the event among which more than **90 %** in sensitive zone (wet zones, zone Natura 2000, conservation areas, flood-risk areas)

+	-
<ul style="list-style-type: none"> <li>- Environmental studies realized before the event to settle the infrastructures in the least sensitive zones</li> <li>- Compensatory Measures on certain sites</li> <li>- Long term monitoring on some sites</li> <li>- No impact on the air quality</li> <li>- No big construction or surfaces sealing</li> </ul>	<ul style="list-style-type: none"> <li>- Few communication on actions carried out</li> <li>- Unprotected lawns not protected and strongly degraded in some places</li> <li>- No ecological cleaning products used</li> </ul>

## V. Long term perspectives on the 2014 WEG legacy

### 16- Human capital and population well-being evolution



#### WEG 2014 effects on human capital and well-being of Norman population

As presented above, Normandy is considered as an area that offer working opportunities but also interesting assets related to its living environment, from which would result a Norman “well-living” and a certain attractiveness.

The 2014 WEG seem to have had an effect of strengthening of this favourable climate, contributing to the growth of population “well-being”, for local inhabitants and the different publics attending the event. We also note that the spectators and the local inhabitants have pleasure to attend the event or to welcome it in their region. All the different publics present during the event and local inhabitants agree to think that WEG 2014 give rise to mainly positive effects for the region in economic, tourism and media terms. They participate in the image and the identity of the area and in the development of the Norman equine industry.

People surveyed within the equine and tourist industry (which all had missions linked with the 2014 WEG) seem to present a minimum level of creativity<sup>6</sup>, this one being more or less stimulated according to the situations. So, a location in the Calvados department, which was more concerned by the 2014 WEG (by opposition to the other Norman departments), seems to be an element stimulating the individuals’ creativity, as well as the membership in the equine industry, for which the 2014 WEG represented a major and exceptional event (compared to the tourist industry which is more used to work in a large-scale event context). At last, the missions linked to this event mainly used human and material resources already in the region.

Although the light revitalization of employment observed in 2014 does not seem to continue, the 2014 WEG seemed to represent an accelerator of careers and to have aroused the creation of some jobs within the equine industry and mainly for the individuals who present a certain creativity.

<sup>6</sup> Creativity is estimated through four indicators (Chantelot, 2010): use of original ideas, freedom to use one's own ideas, ability to identify and solve complex problems, and creation of new systems, applications or products.

## 17- Impact on the equine industry

### Internationalization of the Norman equine industry and effects on its activities

<p><i>Normandy influence</i></p> 	<ul style="list-style-type: none"> <li>+ Confirmation of a "horse area" qualification for the Normandy region within the Norman local authorities</li> <li>+ Recognition of the Norman equine industry on the national level because of media exposure during the Games</li> <li>+ International opening of the Normandy - &gt; new dynamics and attractive assets</li> <li>= Few effects on the various segments of the Norman equine sector</li> </ul>
<p><i>Breeding relaunch</i></p> 	<ul style="list-style-type: none"> <li>+ Promotion of the Norman equine breeding</li> <li>+/= Light increase of the saddle horse and pony sales in 2015, which does not continue in 2016</li> <li>+ Multiplication by 3 of the foreign trade between 2015 and 2016 in the equestrian centre of Saint Lô</li> </ul>
<p><i>Employment</i></p> 	<ul style="list-style-type: none"> <li>= Stability of the employees' number in the horse-riding field in Normandy</li> <li>- The communication difficulties with the organizers didn't allow an implication of the actors of the employment within the equine industry and beyond</li> </ul>
<p><i>Sport</i></p> 	<ul style="list-style-type: none"> <li>+/= Peak of growth in the number of Norman competition organizers in 2014, followed by a slowing down in 2015 to return to a growth similar to the one of the national level in 2016</li> </ul>

### Professionalization support

<p><i>Industry actors</i></p> 	<ul style="list-style-type: none"> <li>+ The Territorial Project:             <ul style="list-style-type: none"> <li>- Source of ideas of development for the area</li> <li>- Federator for the actors</li> <li>- Enhancer of certain administrative procedures</li> </ul> </li> <li>+ Networking of the various actors of the equine industry for the 2014 WEG =&gt; structuring of the sector organization</li> <li>- Difficulties of getting in touch and communication between all the stakeholders of the equine industry</li> </ul>
<p><i>Subsidies</i></p> 	<ul style="list-style-type: none"> <li>+/= Punctual increase of the amount assigned to the encouragement in the equine industry</li> <li>+ Regional subsidies to support the top-level and the regional influence of the equestrian sports further to the 2014 WEG</li> </ul>

## Spotlight on the sport

<p><i>Impact on Norman equestrian eventing</i></p> 	<ul style="list-style-type: none"> <li>+ Recognition of "horsy" sites by local authorities and professionals =&gt; development of the local area</li> <li>+ Increase of the international visitors</li> <li>- The site of the National stud of Le Pin undergoes the consequences of a negative image</li> <li>+ Coordination of all equestrian events in Normandy to give them a better visibility</li> </ul>
<p><i>Popularization and image of equestrian sports</i></p> 	<ul style="list-style-type: none"> <li>- The necessary popularization to make horse-riding become an accessible entertainment deals with various brakes:             <ul style="list-style-type: none"> <li>• Lack of legibility of the equestrian sports that doesn't motivate novice spectators</li> <li>• Media coverage of the 2014 WEG modest and incomparable to what can be observed in other more popular sports, demonstrating the little of interest of the public for equestrian sports</li> <li>• No "star-making" of the French riders to make the equestrian sports known within the public</li> </ul> </li> </ul>
<p><i>Sport results</i></p> 	<ul style="list-style-type: none"> <li>+ Mixed results of the French sportsmen during the 2014 WEG=&gt; question sport politics in the equestrian field</li> <li>+ Collaboration and will to succeed introduced thanks to the 2014 WEG could be related to the good results of the French riders during the 2016 Olympic Games</li> </ul>

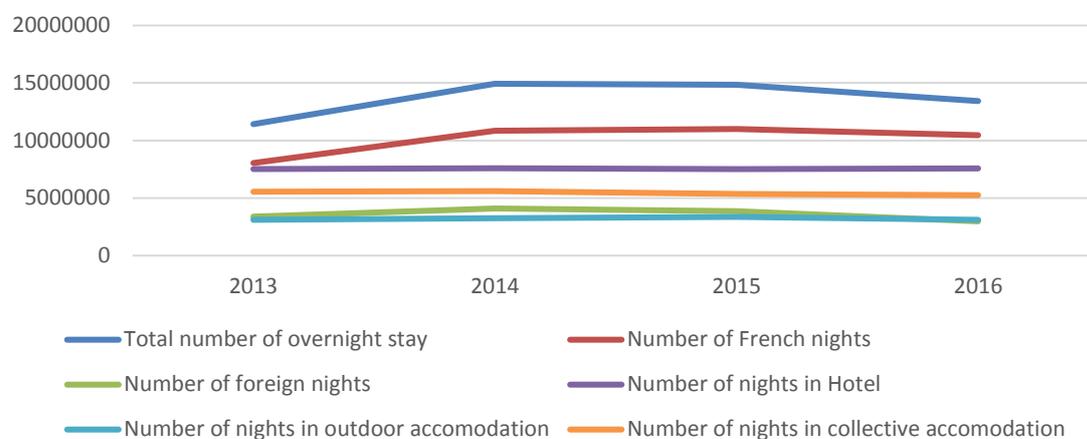
## Popularization of horses and horse-riding

<p><i>Territorial Project benefits</i></p>  	<ul style="list-style-type: none"> <li>+ Ambitious projects (Pied à l'étrier, school riding program) to favour the social cohesion and the discovery of the equestrian world and of the equestrian activities by populations distant from these practices</li> <li>+ Better understanding of the equestrian sector by populations outside the equine industry</li> <li>+ Additional resources in terms of human or time resources for communities to optimize the benefits from the projects</li> <li>+ Getting in touch and structuring of organizational networks that can be reused in the future within the framework of other projects linked or not with the equestrian world</li> <li>- Difficulties related to the event organization and to the specificities of the equine industry (concentrated around a public of specialists)</li> <li>- Lack of continuity in the actions of initiation into equestrian practice after 2014</li> </ul>
<p><i>Licence holder's impact</i></p> 	<ul style="list-style-type: none"> <li>- No relaunching of the growth of horse-riding licensee, on the national level as well as in Normandy</li> <li>- No relaunching of the recruitment of the federal target, girls from 9 to 12 years old</li> <li>+ Confirmation of the number's growth of riders of more than 19 years at the regional and national levels</li> <li>= Not much evolution of the number of competition participants further to the 2014 WEG in Normandy as well as at the national level</li> </ul>

Finally, although the equine breeding seems to benefit from a certain relaunching since 2014 in France as in Normandy, no other major transformation of the equine industry seems to result from the 2014 WEG. Nevertheless, numerous projects were introduced on this occasion, illustrating a will of development of the sector at the local and international levels. Some effects exist, for some very limited but for others longer-lasting. Besides, the actions to popularize the horse and horse riding, organized before and during the Games at a regional level benefited for the greater part only from one-off financing. They nevertheless favoured a certain opening of the Norman public to the horse world, equestrian shows and horse-riding but the elitist image associated with this sport does not seem to disappear for novices. The mediatization of the event and sportsmen, although notable, is far from being comparable to that of the world cups of the most popular sports (as soccer or rugby), underlining the low interest of the public for equestrian sports. Thus, the consequences waited in terms of visibility and growth of the license holders are not there. However, this beginning of opening to the general public, associated with a questioning of the sports politics in the equestrian domain further to the 2014 WEG, seem to be related to the good results of French riders in the 2016 Olympic Games, which engendered the evolution of equestrian sports consideration by the media and the general public. Moreover, the 2014 WEG were the opportunity for Normandy to confirm its image of “equestrian area,” especially at the international level. At the national and regional levels, the exposure of the Norman equine industry allowed a recognition of “horsy” Norman sites by local authorities and professionals. The renunciation of the organizing authorities for a tangible legacy (construction of infrastructures) for the benefit of an intangible legacy (financing of the Territorial Project) seems adapted to the Norman context, given that the region has already numerous equestrian sites. Finally, the 2014 WEG allowed to federate the local actors and to develop the collaborations, of which one consequence was to re-question the organization of this sector.

## 18- Impact on the tourist industry

### Punctual effect on Norman tourism in 2014



Commercial touristic traffic evolution in Normandy from 2012 to 2016 (source: INSEE)

- + 30% increase of total overnight stays' number in 2014
- + Extension of the tourist season in 2014
- Desertification of a part of the traditional French tourists during the 2014 WEG
- Strong decrease of foreign customers in 2016 further to a concentration of this public on 2014 and 2015

### A will to develop the Norman tourist offer



- + Catalyst to create or accelerate the creation of new tourist products on the occasion of the event
- + Bringing Normandy up to standards to remain competitive
- The 2014 WEG would have required a rise in the range the touristic offer which did not take place => re-examination of the exceptional offer for tourism in Normandy to restructure it, widen it, and offer a personalized service

### Strengthening of actors' networks and long-lasting stimulation of the innovation



- + Rapprochement between local actors
- + Development of a creative spirit to coordinate the information and homogenize on form and content (accommodations, transport especially)
- Difficulties in the continuity of projects and collaborations
- Unequal impact on the various actors of the touristic industry
- + Wish to participate again in a similar event to take advantage of the knowledge acquired on the 2014 WEG

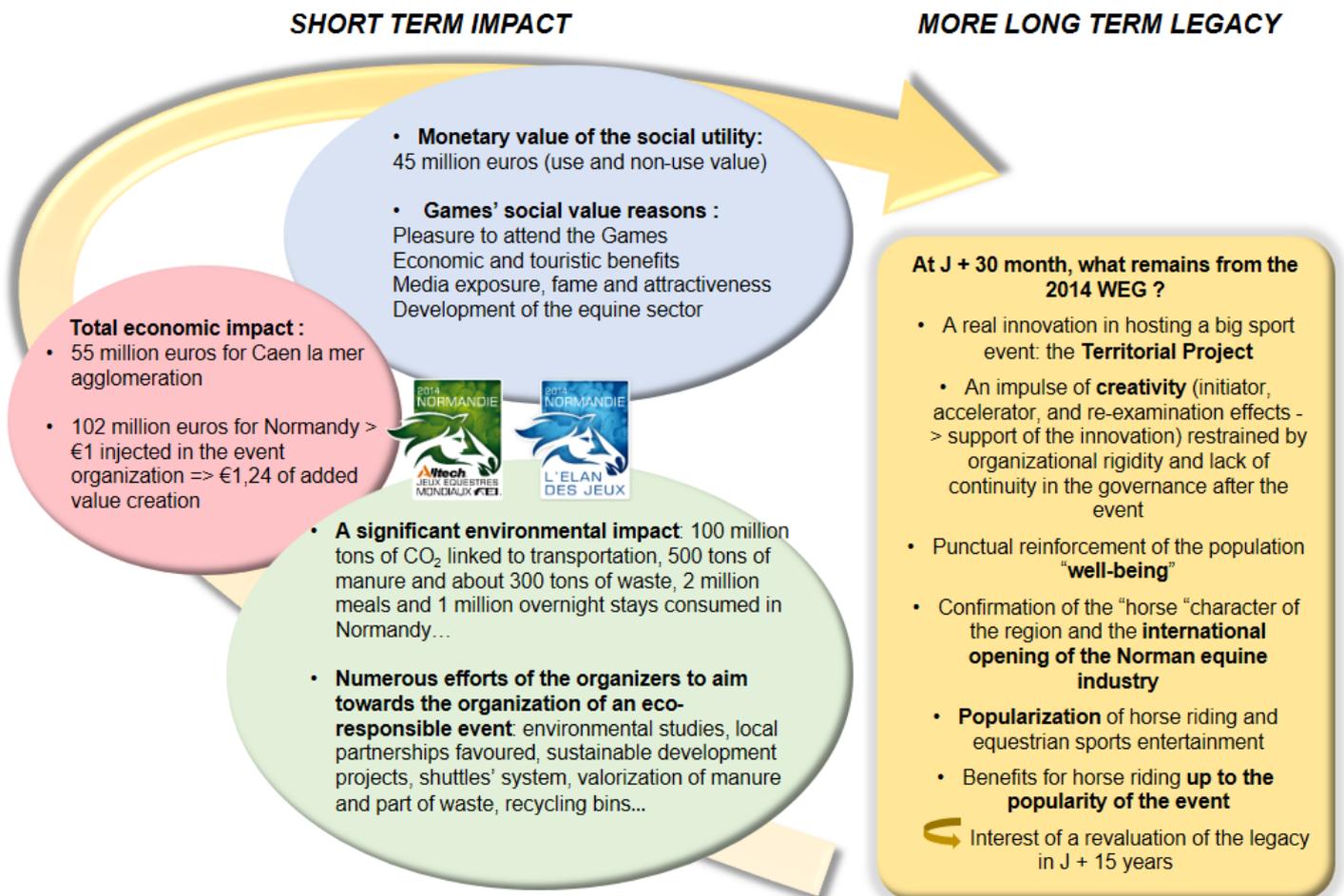
## Lack of integration of the tourism in the organization of the 2014 WEG



- Regret of the actors not to have been more integrated into the WEG 2014 project
- No member of the tourist industry, including regarding transport, was present within the GIP
- Concentration on the organizational aspects of the 2014 WEG rather than on the event promotion

In Normandy, 2014 is characterized by three major international events: the 2014 WEG, the world championship of Kayak and 70<sup>th</sup> anniversary of the D-Day. The trends and evolutions of key figures of the Norman tourist sector in 2014 have to be put in perspective within the framework of these three events impact. Besides, the D-Day remembrance tourism is an important vector of tourism in Normandy, during the years preceding or following anniversaries. Globally, the peak of tourist attendance observed in Normandy in 2014 continues in 2015, and then the trend nullifies for the foreigners and slowly stops for national visitors in 2016. This sharp decrease of the presence of foreign customers in 2016 results from the reduction of the effect of the remembrance tourism two years after the anniversary of the D-Day and from the unsafe climate in France in 2016. In Normandy, the 2014 WEG were the opportunity to diversify the tourist offer, for example by opening it to products of equestrian tourism. So, the event has represented a catalyst to create or accelerate the creation of new products. A lack of adequacy between the demand of high-end tourism and the offer during the event was noticed but allowed to start a reflection on the needed evolutions on this matter. Also, although we notice difficulties to perpetuate certain projects or collaborations introduced during the 2014 WEG, various innovations and actors' networks are reused within the framework of new projects. Finally, a lack of freedom to operate and of collaboration with the organizing authorities are regretted by the tourist actors.

## VI. Conclusion



In the short term, the total economic impact of the event is estimated at 55 million euros for Caen la mer agglomeration and at 102 million euros for Normandy. The comparison of this last result with the total organizational budget of the 2014 WEG shows that for €1 injected in the organization of the event (by public authorities as well as by private partners) corresponds a creation of added value of €1.24 for the Normandy. If we compare the economic impact to the public money invested in the organization (38.5 million euros), we get to a €2.6 ratio of added value creation for €1 injected.

From a social point of view, the contributions of this event for the various stakeholders attending the event and the local population are mainly related to the pleasure to attend it or to welcome it, to its economic and tourist benefits, to the media exposure, the effect of fame and attractiveness for the local area, and to the encouragement they create for the development of the local and even national equine industry. The social utility of the 2014 WEG is estimated at 45 million euros (and cannot be added to the economic impact). The non-use value for the Norman inhabitants (13.5 million euros) does not exceed the amount invested by the Norman local authorities (28.5 million euros). However, the total value of the social utility (45 million euros) exceeds the amount invested by the public sector in general (38.5 million euros). This result associated with the fact that the local inhabitants were globally favourable to the welcome of the Games in Normandy, allows to say that it seemed judicious to invest this public money in the organization of the Games but it wouldn't have been wise to invest much more.

On the environmental aspect, the impact is not unimportant. Nevertheless, even if it is always possible to do more and better, we underline the numerous efforts of the organizers to aim towards the organization of an eco-responsible event.

The appreciation of the legacy of the event at J + 30 months shows that the actors in the field are not aware of all the positive aspects of the 2014 WEG: implementation of a major innovation in the field of big sporting event organization with the Territorial Project; development of local actors' creativity by initiators, accelerators, and of re-examination effects which allowed to support innovation; one-off strengthening of population well-being; international opening of the Norman equine industry; and participation in the popularization of horse riding and of equestrian sports entertainment. The 2014 WEGs effects were, however, slowed down and often remained occasional due to a lack of continuity of the actors and of some projects, difficulties of communication between actors in the field and the organizing authorities, the low mobilization of the equine industry, the small media impact and general public interest. Nevertheless, It is impossible to compare the 2014 WEG with the world cup of widely more popular sports such as soccer or rugby and to expect similar benefits from it. The interest of this study is to present, a few years after the event, the long term perspectives concerning the socioeconomic impacts of a large-scale sporting event. This resonance of the event takes time to be measured and estimated. The coherence of the Territorial Project of the 2014 WEG is its temporality at 15 years, inviting to reevaluate these questionings on the horizon 2030.

This evaluation of the short-term economic, social and environmental impacts of the World Equestrian Games FEI Alltech™ in 2014 of Normandy but also of the long term socio-economic effects represents to our knowledge the most complete impact study of a sporting event led to this day. It presents nevertheless some limits linked to the methodologies we used (question of the relevance to monetize the social utility, absence of a global indicator for the environmental study, study at J + 30 months for long term aspects...). This study will allow to value the 2014 WEG image, at national and international levels. It will highlight the expertise of the French actors and the innovative character of the event, while allowing to advance academic reflections on impact studies of sporting events. It will also enlighten the decision-making to welcome World Equestrian Games or other events on an area and it will allow to optimize their impacts, Finally, it will participate in the "legacy" of the 2014 edition of the Games.