



What strategy for managing and promoting images and visual media for a heritage site manager?

BIBRACTE case study

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An aerial photograph of a landscape in Burgundy, France. The image shows rolling hills covered in dense forests. The foliage is in various stages of autumn, with some trees showing bright yellow and orange, while others remain green. A small village with several buildings is visible in a valley between the hills. The lighting suggests a low sun, creating long shadows and highlighting the textures of the forest and the fields.

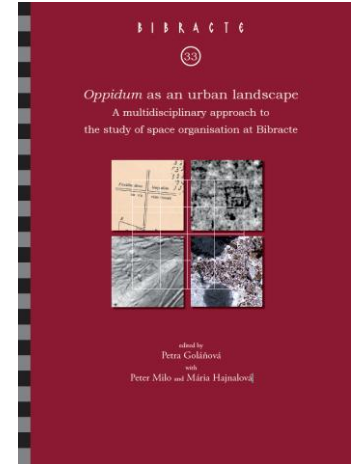
Bibracte

- ✓ a major archaeological site in modern Burgundy
- ✓ the site of a town of the 1st c. BC
- ✓ since 1984, an integrated site management system and a research project shared by different European universities
- ✓ a big and diverse set of data collected over 75 years of archaeological activity (e.g. 144,000 image recording cards)

**BIBRACTE : the management of the complete operational archaeological process,
from the field to the public and the scientific community, today and tomorrow**



BIBRACCE		Objets et prélevements		intervention 426	
Fiche numéro : 2066 / 9 / 931 / 3					
MEUSSE catégorie : <u>alluv</u> couleur objet : <u>noirâtre</u> lieu : <u>non renseigné</u>		nature : <u>sol</u> date : <u>18/04/2006</u>			
des coordonnées : <u>non renseignées</u> voir publication 2067 90 voir publication 2067 1		responsabilité intervention : <u>Mairie de Sade</u> chantier : <u>Plaine du Corvèze (Lal, hors crocnet)</u> module mesuré : <u>au (0) m²</u> type : <u>surve type</u>		INTERVENTION SUR L'OBJET n° type traitement : <u>0</u> responsable : <u>M. Goussard</u> nb lieux : <u>1</u> 207 : <u>non renseigné</u> type d'acte : <u>analyse</u>	
initial : <u>non</u> poids : <u>0</u> puits : <u>4,53</u>		date : <u>18</u> à <u>47</u>		MOUVEMENTS date objet : <u>non</u> lieu : <u>non</u> date mes : <u>non</u>	
détermination : <u>non</u> analyse : <u>non</u> afficher : <u>non</u> Bibrace : <u>non</u>		durée : <u>1</u> h <u>47</u> min chronologie du type : <u>non renseigné</u> date mission selon liste Bibrace : <u>210</u>		COMMENTAIRES EN ACCUS RÉCÉ Date et contenu : <u>non renseigné</u> voir journal des interventions à l'Appel. Veuillez les prélever comme suit : <u>non</u> n° : <u>non</u> , date : <u>non</u> , contenu : <u>non</u>	
description de la mission : <u>non renseignée</u> Ce petit site est typé sur le Massif Bibrace. Il est présent à 33 exemplaires dans les listes des communes. On trouve également des vestiges de l'habitat. bibliographie du type : <u>non renseignée</u> L.1, 6, 4, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647,					



This is a detailed topographical map of the Beuvray area in Burgundy, France. The map shows the ruins of the Visigothic city of Autun, which was founded by King Euric in 475 AD. The map features contour lines indicating elevation, with various peaks and valleys labeled. Key locations include 'le Tournel de la Roche', 'le Tournel de la Vivre', 'Chevaux', 'Beuvray', 'Porrey', and 'Torrege'. The map is oriented with North at the top.

- Site plans
- Drawing of finds
- Hand-written site books
- Photographs (not so many)

- ## 2 / Recent (1980 till today) non-digital media

- Site plans
- Drawing of finds
- Hand-written site books
- Photographs (tens of thousands)

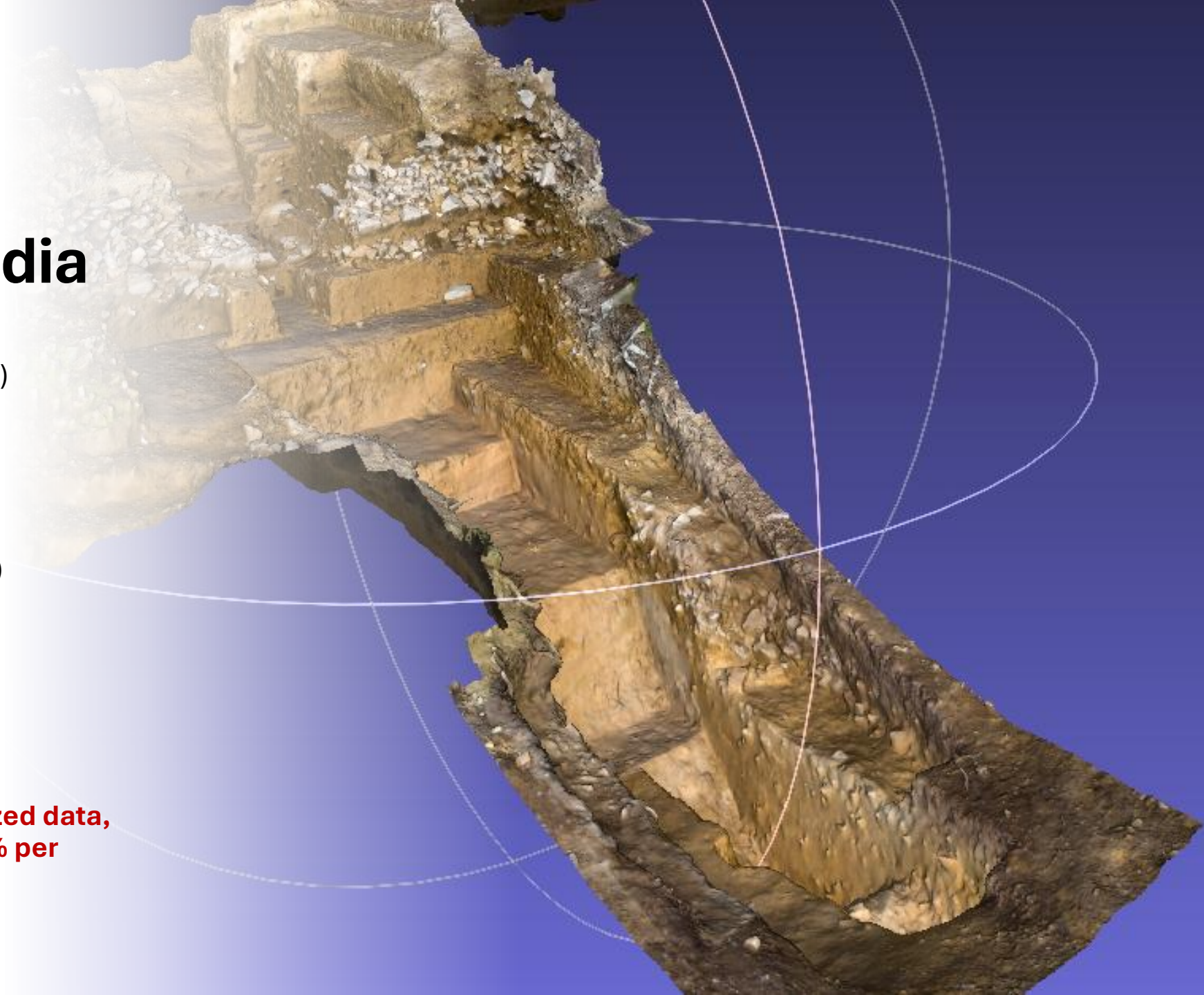
- **All this documentation is being digitalized according to the needs**

➤ **All this documentation is being digitalized according to the needs**

The diversity of visual media/ 2 digitally native media

- Photographs (*order of magnitude*: 10^5)
- 2D Site plans of excavations (10^3)
- Photogrammetric plans and 3D views of excavations (10^3)
- Geophysical and LIDAR surveys (10^2)
- 3D views of objects (10^2)
- Videos (10^2)

➤ **Altogether :**
15 Tbytes of native-digital & digitalized data,
increasing exponentially (by ca. 30% per
year)



Present issues/ 1

long-term archiving of files and efficient access to them

- controlling the increase in the **volume of digital data**
- reliable (and reasonably expensive) public **backup servers**
- publication of the files in **an information system** that brings together all the archaeological data for the site
- make it possible to **aggregate data** on a large geographical scale (the European scale) to facilitate scientific investigations and enable the mobilisation of mass data processing technologies (AI in particular)

- All these objectives are consistent with the ambitions of the **European Collaborative Cloud for Cultural Heritage (ECCCH)**.
- **These issues are presently explored** within SIAMOIS (*Système d'Information Archéologique Mutualisé et Ouvert reposant sur l'Intelligence Sémantique*), a project funded by the French State



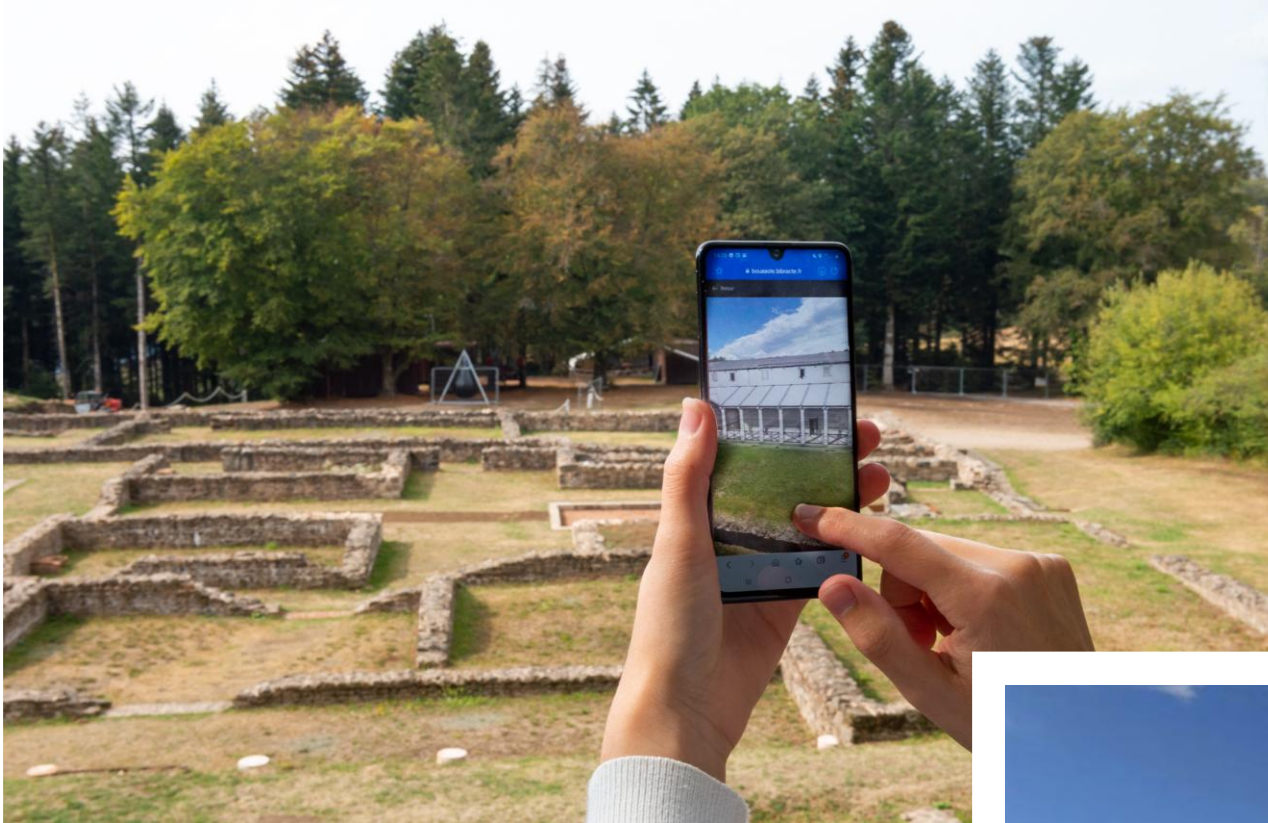
Present issues/ 2

make it easier to share archaeological research and heritage with the widest possible audience

- **Provide relevant access to media** on servers dedicated to a wide audience (cf. Europeana): not only files with quality metadata sets, but also linked to 'paradata' and editorialised to enable facilitate their discoverability and an effective use of the resource
- **Developing mediation tools** accessible on the heritage site, in the museum and remotely

- **A first generation of media was developed in the 2010's, sometimes with great success, but with the limitation that these are proprietary solutions.**
- **The pilot case managed by Bibracte within EUreka3D-XR with the help of the National Technical University of Athens deals with the development of easy to use, free and open-source software to enhance de visit of heritage sites.**





**EUreka3D-XR showcase scenario:
the XR narrative of excavations in progress**

**Showing the invisible:
backfilled digs and ancient buildings**



Present issues/ 3

developing the 3D 'literacy' of Bibracte team in digital issues

- **An in-depth reorganisation of the heritage professions :**
within a team of 40 employees, setting up a digital production chain from the field (*geomatician*) to the end users (*publishing secretary, digital mediation officer*) with the support of an *IT equipment and digital security officer* and coordination by a *digital strategy manager*
- Research projects carried out in partnership with other heritage players and IT specialists to **develop skills and explore new approaches.**

➤ **Archaeological research has not yet completed its digital transition.**
The challenge is to massively develop the possibilities opened up by IT, while guaranteeing the maintenance of very long-term access to data and keeping under control the energy consumption required by the use of IT.

Is this ambition achievable?

