

GUGLIELMO GUARNERA

Research & Development Manager | Systems Architect | Workflow Automation & Production Intelligence

Rome, Italy - Hybrid | kurdog@gmail.com | linkedin.com/in/guglielmoguarnera | Born: Rome, 30 Dec 1975

EXECUTIVE PROFILE

Research & Development Manager, Systems Architect and Workflow Automation Specialist with 25+ years of experience designing, integrating and operating complex systems across media technology, broadcast engineering, virtual production and AI-driven operational environments.

Career path connects early data-analysis and automation work, full-cycle audiovisual production, broadcast R&D, LED volume and real-time media infrastructures, and current development of AI-native workflow systems through KR D.

Main professional value: entering complex multi-system environments, understanding operational constraints, aligning creative and technical stakeholders, and building practical systems that work under real production pressure.

CORE POSITIONING

- **Primary profile:** R&D Manager / Systems Architect / Workflow Automation Specialist
- **Main domains:** AI systems, broadcast, virtual production, real-time media and operational infrastructure
- **Differentiator:** hybrid background across creative production, field operations, engineering, automation and user-first tools
- **Enterprise value:** ability to translate complex operational problems into systems, procedures, local tools, provenance layers and automation

CAREER HIGHLIGHTS

- Created and managed an internal R&D department at AMG International, focused on broadcast systems, media servers, automation, workflow and real-time infrastructures.
- Designed graphics rooms, playout systems, studio workflows, scenic light/video management and automation layers for major national television productions.
- Worked across X Factor, Italia's Got Talent, Amici, RAI, LA7, Fremantle, institutional events and large-scale broadcast/live environments.
- Senior Volume TD / technical lead on international virtual production projects, including 104 consecutive production days on Those About To Die.
- Developed KR D systems for operational AI, local-first workflow automation, document intelligence, computer-vision automation, provenance and legacy-system orchestration.

TECHNOLOGY DOMAINS

AI systems, local-first workflow automation, broadcast engineering, virtual production, LED volume, Unreal Engine, Pixera, TouchDesigner, media servers, computer vision, heterogeneous data extraction, provenance, context packaging, legacy integration.

KRD - RESEARCH & DEVELOPMENT SYSTEMS PORTFOLIO

KRD di Guarnera Guglielmo | 2021 - Present | Rome / Hybrid

KRD is the independent professional and R&D vehicle used to design, prototype and deploy operational systems for media pipelines, AI automation, production intelligence and complex workflow orchestration.

Core Activities

- Architecture of AI-native workflow systems combining structured extraction, deterministic controls, operator review and human-in-the-loop decision flows.
- Design of automation layers for legacy software environments without public APIs, including computer-vision driven interaction, structured data capture and guided operator workflows.
- Development of production-intelligence systems for media ingestion, narrative analysis, operational coordination, project memory and context packaging for efficient LLM interaction.
- Creation of user-owned and operator-owned data infrastructures where storage, provenance, access and operational context remain under the user/operator control.
- Design of artist-first and user-first systems able to work in the background, reconstructing fragmented work from heterogeneous sources while preserving provenance and source relationships.
- Local-first implementation approach for fast operational tools, minimizing latency and keeping sensitive workflow context close to the operator where possible.

Representative KRD Systems

- **MailAgent:** Local-first, case-centric orchestration system for complex operational workflows: evidence ingestion, status handling, mail proposal logic, operator review and structured communication, designed for fast daily use.
- **VisionAgent:** Automation and structured data extraction layer for legacy software environments without APIs; screen understanding, selector diagnostics, guided operator workflows and robust interaction with software that cannot be integrated directly.
- **ScriptLab:** Script-to-production intelligence system connecting narrative material, ingestion, contextual planning, previs generation and production workflow orchestration.
- **AIArtisan / AiA:** Media and post-production pipeline system for ingestion, search, contextual asset organization and workflow orchestration across audiovisual production environments, with artist-first project memory and context packaging.

REPRESENTATIVE KRD SYSTEMS CONTINUED

- **KURA:** Personal medical archive and user-owned health-data infrastructure for heterogeneous medical and administrative inputs: reports, documents, images, photographed handwritten notes, recipes, invoices, receipts, prescriptions and related clinical records. The system recognizes, classifies, extracts and orders them into structured longitudinal data, provenance-aware context and a private AI-prioritized dashboard.
- **Glimpser:** AI-native visual intelligence and monitoring infrastructure with its own pipeline for contextual observation, media analysis, adaptive monitoring and operational environment understanding, designed to organize signals into coherent context while preserving source relationships and provenance.
- **Famousify:** Generative commerce and identity-transformation platform focused on style-consistent media generation, asset pipelines and personalized content production.
- **AKASHA:** Longitudinal analysis platform focused on memory, language and decision patterns through consensual data, verifiable sources and interpretable models.
- **Pixera VPT Operator:** Operator-side control and documentation concept for Pixera virtual production workflows, show-state logic, DIT/continuity views, context handoff and external control surfaces.

Selected Systems Designed & Deployed

- Broadcast graphics rooms, superimposed broadcast systems, media-server infrastructures and studio playout automation.
- LED volume and virtual production workflows integrating Unreal Engine, camera tracking, Pixera/media servers and on-set operational procedures.
- AI-driven case orchestration, document intelligence and legacy software automation systems through KRD, with emphasis on local speed and operator review.
- Multi-source intelligence systems, including KURA health-data workflows and Glimpser visual pipelines, able to classify and order text documents, images, photographed handwritten material, invoices, receipts, prescriptions, clinical records and operational signals into provenance-aware context.
- Context-package and project-memory layers designed to let local or constrained LLM workflows operate faster and with less repeated background reconstruction.
- Developer/provenance tooling reconstructing operational work sessions from repository history and semantic commit search.

VIRTUAL PRODUCTION & REAL-TIME MEDIA SYSTEMS

Senior technical experience in LED volume operation, Unreal Engine workflows, camera tracking, media server pipelines, real-time playback and on-set R&D for film, series and commercial productions.

Luno Studios - Virtual Production Technical Lead / Senior Volume TD | 2023 - Present | Rome / On-site

- Senior Volume TD on **Those About To Die**, directed by Roland Emmerich: large-scale LED volume production at Cinecitta with 104 consecutive production days and coordination with international teams including DNEG and Dimension Studio.
- Operational responsibility across LED volume workflows, Unreal-based production pipelines, camera tracking integration, media-server operation and real-time content stability.
- On-set R&D with engineering teams on tracking systems and non-standard production constraints, including automotive reflection continuity and AI-assisted synthetic media support.
- Technical supervision in high-pressure shooting environments where system reliability, fast diagnosis and cross-department coordination are essential.

Selected Virtual Production Credits

- **Those About To Die:** Senior Volume TD - international LED volume production, 104 consecutive production days, Unreal/LED volume workflow supervision.
- **The Old Guard 2:** Volume TD - virtual car sequences, media-server-driven playback, camera and real-time content synchronization.
- **Lubo:** Volume Supervisor and Pixera content operator for Giorgio Diritti feature production.
- **White Mars:** Volume Supervisor with Dimension Studio on Unreal-based virtual production workflow.
- **Brunello:** Virtual Production Technical / Pixera Operator for Giuseppe Tornatore project.
- **Motorvalley:** Technical lead / on-set R&D on VP tracking systems and AI-assisted reflection-angle workflows for automotive scenes.
- **Milano-Cortina 2026 / Poste Italiane:** Virtual Production Technical / Media Server support for commercial production workflows.

Dimension Studio - Volume Supervisor | 2024 | Rome / On-site

Volume Supervisor on Unreal-based VP workflow, supporting technical continuity, LED volume operations and cross-team coordination.

Relevant Technical Environments

LED volume, Unreal Engine, camera tracking, Pixera, media servers, real-time playback, ICVFX, on-set R&D.

AMG INTERNATIONAL - HEAD OF R&D / WORKFLOW MANAGER

AMG International | 2017 - 2022

Created and managed an internal R&D function for broadcast, studio and event technologies, with responsibility for system design, implementation, team coordination, operational workflows and technical delivery.

Core Responsibilities

- Designed and implemented broadcast graphics rooms, media-server infrastructures, studio playout systems and automation workflows.
- Built and optimized video workflows for live and recorded television, including superimposed graphics, scenic video/light management and interactive studio control.
- Integrated real-time 2D/3D applications, Unreal Engine environments, tracking, mapping, IP video transmission and interaction design into production systems.
- Managed technical teams, training, implementation supervision, deployment and show operation under tight production constraints.

Selected Broadcast and Event Systems

- **X Factor 11-15:** Design and implementation of graphics rooms, studio graphics broadcasting systems, superimposed broadcast systems, scenic-light management systems and studio workflow.
- **Italia's Got Talent 2017-2022:** Design and construction of graphics rooms, superimposed broadcasting systems, studio video playout and scene-management systems.
- **Amici 2018-2022 + Celebrities:** Design and realisation of creative graphics rooms and studio production workflows.
- **Enjoy / Mediaset:** Directional design, scenic video/light, media server and playout automation with presenter-controlled interactive studio interface.

AMG SYSTEMS CONTINUED

- **LA7 - Sono le 20:** Design, configuration and installation of full studio infrastructure: mixer, media server, on-air graphics, camera control, recording, RVM and superimpose.
- **RAI / Zecchino d'Oro / Alla Lavagna:** Broadcast studio systems, signal distribution, scene systems and operational setup for television productions.
- **Game of Talent / Fremantle:** Design of studio broadcasting system, superimpositions and automations.
- **Virtual Unreal events:** Design, implementation and operation for virtual events for Ploom / Japan Tobacco, EHEA / European Community, ENEL and Philip Morris Italia.

Additional Selected Environments

RAI programme presentations in Milan/Rome; Opera House Attila video system; Poste Italiane Sindaci d'Italia; Gazzetta dello Sport Awards; Unicredit annual events; Intesa Sanpaolo; Toyota; Altaroma; Circo Massimo New Year event; Festival delle Letterature; Rockin'1000 / World Investment Bank; Maluma concert; Mercedes interactive installations.

Enterprise Relevance

AMG experience demonstrates department creation, operational R&D, multi-team coordination, system integration, broadcast reliability and delivery of production-critical infrastructure in environments where failure is visible immediately.

EARLIER PRODUCTION, VFX & DATA-AUTOMATION BACKGROUND

Cliche - Producer / Post Producer / Colourist / Editor / R&D | 2011 - Present | Rome

Production and post-production activities across corporate, institutional, cultural and audiovisual projects. Responsibilities include editing, colour grading, workflow supervision, project coordination and technical consulting.

SAFADO Film - Founding Partner | 2012 - Present | Rome

Documentary production and cultural initiatives, including social and historical documentary projects and festival activities.

Canecane - Founder / Owner / President | 2001 - 2011 | Rome

Founded and developed a multidisciplinary audiovisual collective and later structured company active in interactive installations, live visual systems, VFX, animation, compositing, visual production, technical pipeline design and team management.

During the direct involvement period, Canecane evolved beyond experimental live visuals into professional VFX and animation work for mainstream Italian theatrical cinema, including broad-audience comedy/comic productions, genre films, international productions and television work.

2K Produzioni - Co-Founder | 1999 - 2005 | Rome

Full-cycle audiovisual production company: directing, production, editing, compositing, post-production, authoring and delivery for music videos, television content, documentaries, commercials and cultural projects.

Studio Market Selector - Consultant | 1990s - 2006 | Italy / International contexts

Early professional experience in automated statistical data collection, road-traffic surveys, urban traffic analysis, data loading and reporting, workflow automation, personnel management, training and supervision, including projects connected to European Community and international institutional frameworks.

CERTIFICATIONS & TRAINING

- MegaPixelVR Helios Specialist
- ROE LED Specialist
- BlackTrax training
- Advanced Notch operator training participation

LANGUAGES

Italian: Native. English: Professional working proficiency.

BUSINESS DETAILS

KRD di Guarnera Guglielmo | Via Monte Gemma 16, 00141 Roma | P.IVA 11816701004 | C.F. GRNGLL75T30H501D | REA RM-1329804