**Requirements Specification Document**

**Disruptor Post Workflow Management Software**

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**Prepared for:** Disruptor Post  
**Project:** Post-Production Workflow Management System

**1. Executive Summary**

**1.1 Project Overview**

Disruptor Post requires a comprehensive workflow management software to streamline the mapping of client and manager requirements to post-production work across VFX, Sound Editorial, Colour, Restoration, and Delivery departments. The primary objective is to eliminate bottlenecks in requirement translation and task assignment while maintaining creative quality and meeting deadlines.

**1.2 Business Problem**

Current challenges include:

* Inefficient requirement mapping from clients/managers to editors/developers
* Lack of centralized communication and task tracking
* Difficulty in maintaining consistency across different post-production disciplines
* Limited visibility into project progress and resource allocation

Pain points

**1.3 Solution Scope**

A web-based workflow management platform that centralizes requirement gathering, task assignment, progress tracking, and delivery coordination across all post-production departments.

The software will:

* Manage the post-production workflow across VFX, Sound Editorial, Colour, Restoration, and Delivery.
* Facilitate collaboration between clients, managers, and editors.
* Seamlessly integrate with DaVinci Resolve and potentially other tools.
* Provide a central platform for project tracking, requirement mapping, task assignment, and approval.
* Handle processes like color continuity management and quality control.

**1.4. Stakeholders**

* Clients: Provide requirements and feedback.
* Project Managers/Producers: Assign tasks, monitor progress, manage timelines.
* Editors / Artists (VFX, Sound, Colourists, Restoration): Execute tasks and deliver assets.
* Delivery/Operations Team: Ensure final output delivery per client specs.
* System Administrators: Manage users, roles, integrations.

1.5 Related softwares:

Davinci Rerolve: should get the API documents

1.6. Business As Usual:

- How to start a project?

- How the clients are manges?

- How the timeline is managed

- How change requirements are managed? How does it relates to DR and shots allocation

- How tasks are allocated?

Infor: some images of the films.

Setting up the project:

Production date

Is project a silent film

Yes/ No?

Is music required?

Yes/ No

If yes, who is the publisher. Dropdown./ related to vendor database (create a publisher.(=> file related to that publisher will be shared to that project storage)..

Does the film needs VFX?

Sound: Composer, VFX, .

Users: staff, manager, vendor.

Music, calendar,

You know the team, status, database/ send to the database, it should be a process now.

Calendar. Upload the film, store it in the assets and select the servers.

Acess. : Nominating the team leader: PIC, updates

Kdenlive: ripping>

1. Slicing film: Davinci resolve can do it.

The storage is in-house. Maybe online in the future.

Client=> Projects: Client/ internal/ joint project=>

Create a prj

1. Create the project

1.1Automatic copy/ search/

Post Digital Visual effect.

User AI (search on name and the publish year of the movie) to break down public domain, copy right, clearance report => legal team to investigate

How long the shots is per frame. 678 shots/ . Create reports.

1.2

Accounting and budget model. Speed of the server while render. How long per frame per second.

Document management.

Length, music, vfx, mix….: template for the budget.

It depends on the duration of the film

Create music licensing, a default is 1000 per music per licensing

To buld a template inside the prj.

Super admin can create the template. Mitch can show how he does it.

Then we have invoicing.

Create a cost price for each music from the quotes from the market.

Prj: who works on invoicing?

Users: Contractor: Whatever dolar per film. That would be selected

It can be per minute or a per prj. See if it fit the bugets.

Prj length: start date, end date. Database of the crew. Staff, management, admin, superadmin, vendors, crew.

Product buying: services, sound mixer.

Prj. Go to the other dept.

Application:

Departments: Film restoration department/ production, Key Frame Artist, VFX compositors, QC managers, Prj manager, Distributor and Cinema (Owner).

Film, IT, Accounting, Management, Legal. Super admin, marketing/ Business Unit.

Prj process: Build up the trailer. Refine the shots in the film.

How do we start to create the variables. Change the start, end, duration of the film.

Default template.

The resource management control: to see who is available for these tasks.

The moment we hit go, we know the budget, timeline, team.

Project setup process.

Aim: Streamline, get more prj done => Backup of all the data.

Who is the task, nominate the artists. Build the team. Eliminate all the paper works. Comprehensive investigation/

Automate to go to the next step.

Goal: pdv module. Collect it all, automate the upload.

Production: total timeline of the prj, processing timeline, timeframe to select, duration of the film, number

What checkboxer/ dropdown should be selected?

Table of the data.

Authorize the server access. Select the folder to send the upload to

Pipe into it. Download.

Add meeting note on each prj

The cost price based on job title..

Add holiday, add sick leaves

Release- version.

Prj closure:

**PDV module:**

**Pj no.**

**Company**

**Company code**

**Build a team for a project, name the squad.**

**Capacity allocation per week. If the person still be in the capacity, there would be a green light.**

**Outsource: company with multiple people.**

**The shots, time, export from the Davinci Resolve.**

**Projects:**

**Setup – slice it**

**Manage on shots.**

**Dashboard for the manager**

**TYPE of the task:n**

**Remastering checklist – Customer: Restoration list**

**List of the checklists.**

**Export the the Meeting note**

**Template of the check list, can add to the check list**

**Project Setup (Proj info, squad, and the shots allocation) – Prj prcessing (dashboard and resource allocation)– Prj reporting (list of documents need to be created) – Prj Delivery.**

**Each step should have an upload button**

**(Generate electronic sign and reports, Checklist to upload files…)**

**@ and notification alert system**

**Employee info: agreements, contracts,**

**Risks:**

**Changes in the process, Different version of the shots creating**

**2. Functional Requirements**

**2.1 User and Client Management**

**2.1.1 Client Management System (FR-001)**

* **Description:** System shall provide comprehensive client information management
* **Priority:** Critical
* **Acceptance Criteria:**
  + Create and maintain detailed client profiles with contact information
  + Store client preferences, brand guidelines, and technical specifications
  + Maintain client project history and relationship tracking
  + Configure client-specific workflows and approval processes
  + Generate client access portals for project visibility and approvals
  + Track client billing information and contract details
  + Support client organization hierarchies (parent companies, subsidiaries, departments)
  + Client communication preference settings (email, portal notifications, etc.)

**2.1.2 User Management and Roles (FR-002)**

* **Description:** System shall manage internal team members with role-based permissions
* **Priority:** Critical
* **Acceptance Criteria:**
  + Create user profiles with skills, certifications, and availability
  + Define role-based access controls (Admin, Project Manager, Editor, Artist, Client, etc.)
  + Configure department-specific permissions (VFX, Sound, Colour, Restoration, Delivery)
  + Track user workload, capacity, and performance metrics
  + Manage user onboarding and offboarding workflows
  + Support temporary contractors and freelancer accounts
  + Integration with HR systems for employee data synchronization
  + User preference settings for notifications and interface customization

**2.2 Core Workflow Management**

**2.2.1 Project Initialization (FR-003)**

* **Description:** System shall allow creation of new projects with comprehensive metadata
* **Priority:** Critical
* **Acceptance Criteria:**
  + Create projects with client information, deadlines, and specifications
  + Upload reference materials (videos, images, audio, documents)
  + Define project hierarchy (sequences, scenes, shots)
  + Set budget parameters and resource allocation
  + Generate unique project identifiers and codes

**2.2.2 Requirement Capture and Translation (FR-004)**

* **Description:** System shall facilitate structured requirement gathering from clients and managers
* **Priority:** Critical
* **Acceptance Criteria:**
  + Standardized requirement forms for each post-production discipline
  + Rich text editing with multimedia support for requirement descriptions
  + Template-based requirement sets for common project types
  + Automatic requirement parsing and categorization
  + Version control for requirement changes and revisions

**2.2.3 Task Decomposition and Assignment (FR-005)**

* **Description:** System shall automatically break down requirements into actionable tasks
* **Priority:** Critical
* **Acceptance Criteria:**
  + AI-assisted task generation based on requirement analysis
  + Pre-configured task templates for standard workflows
  + Automatic skill-based assignment to appropriate team members
  + Dependency mapping between tasks and departments
  + Effort estimation and timeline generation

**2.3 Department-Specific Functionality**

**2.3.1 VFX Management (FR-006)**

* **Description:** Specialized tools for visual effects workflow management
* **Priority:** High
* **Acceptance Criteria:**
  + Shot breakdown and VFX element tracking
  + Asset management for 3D models, textures, and renders
  + Render farm integration and queue management
  + Version control for VFX shots and iterations
  + Quality review and approval workflows
  + Integration with industry-standard VFX software (Maya, Nuke, Houdini)
  + **DaVinci Resolve VFX integration for Fusion compositing workflows**

**2.3.2 Sound Editorial Management (FR-007)**

* **Description:** Audio post-production workflow coordination
* **Priority:** High
* **Acceptance Criteria:**
  + Audio asset library and version management
  + Sync and timing coordination with picture editorial
  + Multi-track audio session management
  + Sound effect and music library integration
  + Audio quality control and approval processes
  + Integration with DAW software (Pro Tools, Logic Pro, Nuendo)
  + **DaVinci Resolve Fairlight audio integration and timeline synchronization**

**2.3.3 Colour Grading Management (FR-008)**

* **Description:** Color correction and grading workflow support with extensive DaVinci Resolve integration
* **Priority:** Critical
* **Acceptance Criteria:**
  + **Direct DaVinci Resolve project file (.drp) import and export**
  + **Real-time DaVinci Resolve timeline synchronization and status updates**
  + **Power Grade and LUT management through DaVinci Resolve integration**
  + **Color decision list (CDL) and metadata exchange with DaVinci Resolve**
  + **DaVinci Resolve Render Queue integration and monitoring**
  + **Gallery still frame export and approval workflow from DaVinci Resolve**
  + **DaVinci Resolve Project Server integration for collaborative grading**
  + **Remote color grading session management and client review integration**
  + Color reference and mood board integration
  + Before/after comparison tools with frame-accurate playback
  + Color correction notes and feedback system with timecode precision
  + Monitor calibration tracking and verification
  + **HDR and wide gamut workflow support through DaVinci Resolve**

**2.3.4 Restoration Workflow (FR-009)**

* **Description:** Digital restoration and cleanup process management
* **Priority:** Medium
* **Acceptance Criteria:**
  + Damage assessment and cataloging tools
  + Frame-by-frame restoration tracking
  + Before/after quality comparison
  + Automated defect detection and flagging
  + Archive-quality output verification
  + Integration with restoration software (Phoenix, PFClean)
  + **DaVinci Resolve noise reduction and restoration tool integration**

**2.3.5 Delivery Management (FR-010)**

* **Description:** Final delivery coordination and quality assurance
* **Priority:** High
* **Acceptance Criteria:**
  + Multi-format delivery specification management
  + Automated quality control checks and validation
  + Delivery scheduling and deadline tracking
  + Client approval and sign-off workflows
  + Archive and backup coordination
  + Delivery confirmation and tracking
  + **DaVinci Resolve render queue integration for delivery formats**
  + **Automated delivery package creation from DaVinci Resolve projects**

**2.4 DaVinci Resolve Integration Suite (FR-011)**

* **Description:** Comprehensive DaVinci Resolve integration for seamless workflow management
* **Priority:** Critical
* **Acceptance Criteria:**
  + **Real-time project status monitoring from DaVinci Resolve sessions**
  + **Automatic project backup and version control for .drp files**
  + **Multi-user collaboration support for DaVinci Resolve Project Server**
  + **Render job queue management and progress tracking**
  + **Automatic metadata extraction from DaVinci Resolve projects (timelines, clips, effects)**
  + **Client review integration with DaVinci Resolve's Frame.io panel**
  + **Conforming and EDL management for DaVinci Resolve import**
  + **Color space and ACES workflow management**
  + **Integration with DaVinci Resolve's scripting API for automation**
  + **License management and usage tracking for DaVinci Resolve Studio**
  + **Hardware monitoring for DaVinci Resolve workstations (GPU usage, storage, etc.)**
  + **Automatic proxy media management and transcoding workflows**

**2.5 Communication and Collaboration**

**2.5.1 Real-time Communication (FR-012)**

* **Description:** Integrated communication tools for team coordination
* **Priority:** High
* **Acceptance Criteria:**
  + In-context messaging and commenting on specific shots/tasks
  + @mention notifications for urgent communications
  + Video/audio call integration for review sessions
  + Screen sharing for technical discussions
  + Communication history and searchability
  + **DaVinci Resolve session-aware messaging with timecode references**

**2.5.2 Review and Approval System (FR-013)**

* **Description:** Structured review workflows with approval tracking
* **Priority:** Critical
* **Acceptance Criteria:**
  + Multi-stage approval workflows (internal, client, final)
  + Frame-accurate annotation and feedback tools
  + Approval status tracking and notifications
  + Revision request management and tracking
  + Automated routing to appropriate reviewers
  + **Direct integration with DaVinci Resolve's review and approval tools**
  + **Automated still frame generation from DaVinci Resolve for client reviews**

**2.6 Resource and Schedule Management**

**2.6.1 Resource Allocation (FR-014)**

* **Description:** Team member and equipment scheduling system
* **Priority:** High
* **Acceptance Criteria:**
  + Team member availability and skill tracking
  + Equipment and facility booking system
  + Workload balancing and optimization
  + Resource conflict detection and resolution
  + Capacity planning and forecasting
  + **DaVinci Resolve workstation and license scheduling**
  + **GPU resource monitoring and allocation for DaVinci Resolve tasks**

**2.6.2 Timeline and Milestone Tracking (FR-015)**

* **Description:** Project scheduling and progress monitoring
* **Priority:** Critical
* **Acceptance Criteria:**
  + Gantt chart visualization with dependencies
  + Critical path analysis and risk identification
  + Automated milestone notifications and reminders
  + Progress reporting and dashboard views
  + Schedule adjustment and impact analysis
  + **DaVinci Resolve render time estimation and scheduling**

**2.7 Reporting and Analytics**

**2.7.1 Progress Reporting (FR-016)**

* **Description:** Comprehensive project status and progress reporting
* **Priority:** Medium
* **Acceptance Criteria:**
  + Real-time project dashboards for stakeholders
  + Customizable report generation (daily, weekly, monthly)
  + Progress metrics and KPI tracking
  + Bottleneck identification and analysis
  + Resource utilization reporting
  + **DaVinci Resolve usage analytics and performance metrics**

**2.7.2 Performance Analytics (FR-017)**

* **Description:** Team and project performance analysis tools
* **Priority:** Medium
* **Acceptance Criteria:**
  + Team productivity metrics and trends
  + Project profitability analysis
  + Quality metrics and error tracking
  + Client satisfaction scoring
  + Predictive analytics for future projects
  + **DaVinci Resolve project complexity analysis and time estimation**

**3. Non-Functional Requirements**

**3.1 Performance Requirements**

**3.1.1 Response Time (NFR-001)**

* **Description:** System response time standards
* **Priority:** High
* **Requirements:**
  + Page load times: < 3 seconds for standard operations
  + Video preview loading: < 5 seconds for HD content
  + Search operations: < 2 seconds for results display
  + File upload processing: Progress indication for files > 100MB

**3.1.2 Throughput (NFR-002)**

* **Description:** System capacity and concurrent user support
* **Priority:** High
* **Requirements:**
  + Support 100+ concurrent users without performance degradation
  + Handle 10,000+ file uploads per day
  + Process 1,000+ task updates per minute
  + Support 50+ simultaneous video stream previews

**3.2 Scalability Requirements**

**3.2.1 Horizontal Scaling (NFR-003)**

* **Description:** System ability to scale with growing user base and data
* **Priority:** Medium
* **Requirements:**
  + Auto-scaling infrastructure to handle load spikes
  + Database partitioning for large project datasets
  + CDN integration for global content delivery
  + Microservices architecture for independent scaling

**3.3 Security Requirements**

**3.3.1 Authentication and Authorization (NFR-004)**

* **Description:** User access control and security measures
* **Priority:** Critical
* **Requirements:**
  + Multi-factor authentication (MFA) support
  + Role-based access control (RBAC) with granular permissions
  + Single Sign-On (SSO) integration with enterprise systems
  + Session management with automatic timeout
  + API authentication using OAuth 2.0 or JWT tokens

**3.3.2 Data Protection (NFR-005)**

* **Description:** Data security and privacy protection
* **Priority:** Critical
* **Requirements:**
  + End-to-end encryption for sensitive data transmission
  + Encrypted storage for all user data and media files
  + Regular security audits and vulnerability assessments
  + GDPR and industry compliance (SOC 2, ISO 27001)
  + Audit trails for all system activities

**3.4 Reliability and Availability**

**3.4.1 System Availability (NFR-006)**

* **Description:** System uptime and reliability requirements
* **Priority:** Critical
* **Requirements:**
  + 99.9% uptime availability (less than 8.76 hours downtime/year)
  + Automated failover and disaster recovery
  + Daily automated backups with point-in-time recovery
  + Load balancing across multiple server instances

**3.4.2 Data Integrity (NFR-007)**

* **Description:** Data consistency and recovery capabilities
* **Priority:** Critical
* **Requirements:**
  + Zero data loss tolerance for project files and metadata
  + Automatic data validation and consistency checks
  + Version control for all critical system data
  + Geographic backup redundancy

**3.5 Usability Requirements**

**3.5.1 User Interface (NFR-008)**

* **Description:** User experience and interface standards
* **Priority:** High
* **Requirements:**
  + Intuitive, responsive web interface supporting desktop and tablet
  + Consistent design language following modern UI/UX principles
  + Accessibility compliance (WCAG 2.1 AA standards)
  + Multi-language support for international teams
  + Customizable dashboards and workspace layouts

**3.5.2 Training and Support (NFR-009)**

* **Description:** User onboarding and support requirements
* **Priority:** Medium
* **Requirements:**
  + Interactive tutorials and guided onboarding
  + Comprehensive help documentation and knowledge base
  + In-app contextual help and tooltips
  + Video training materials for complex workflows

**3.6 Integration Requirements**

**3.6.1 Third-Party Software Integration (NFR-010)**

* **Description:** Integration with existing post-production tools
* **Priority:** High
* **Requirements:**
  + **DaVinci Resolve API integration for real-time project monitoring and control**
  + **DaVinci Resolve Project Server connectivity for multi-user collaboration**
  + **DaVinci Resolve Database (PostgreSQL) integration for project metadata**
  + **DaVinci Resolve Scripting API support for workflow automation**
  + API integrations with other major creative software suites
  + File format support for industry-standard formats (.drp, .edl, .xml, .aaf, etc.)
  + Cloud storage integration (AWS S3, Google Cloud, Azure)
  + Calendar and email system integration
  + Accounting software integration for project billing
  + **Frame.io integration through DaVinci Resolve's native panel**

**3.7 Maintenance and Support**

**3.7.1 System Maintenance (NFR-011)**

* **Description:** Ongoing maintenance and update requirements
* **Priority:** Medium
* **Requirements:**
  + Automated system updates with zero-downtime deployment
  + Monitoring and alerting for system health
  + Performance optimization and database maintenance
  + Regular feature updates and enhancements

**4. Technical Constraints**

**4.1 Platform Constraints**

* Web-based application accessible via modern browsers
* Mobile-responsive design for tablets (iPad Pro, Surface Pro)
* Cloud-hosted infrastructure with global accessibility
* Support for high-resolution video preview and playback
* **DaVinci Resolve workstation compatibility (macOS, Windows, Linux)**
* **Integration with DaVinci Resolve Project Server infrastructure**
* **Support for high-bandwidth video workflows and shared storage systems**

**4.2 Integration Constraints**

* Must integrate with existing Active Directory/LDAP systems
* Compatible with current storage infrastructure
* API compatibility with major post-production software vendors
* Compliance with industry file format standards
* **DaVinci Resolve version compatibility (minimum v18.0, optimized for v19.0+)**
* **PostgreSQL database compatibility for DaVinci Resolve Project Server**
* **Network infrastructure requirements for real-time DaVinci Resolve integration**

**4.3 Regulatory Constraints**

* GDPR compliance for EU clients
* SOC 2 Type II certification requirements
* Industry-specific data retention policies
* International content protection standards

**5. Success Criteria**

**5.1 Primary Success Metrics**

* **Requirement Mapping Efficiency:** 75% reduction in time from requirement capture to task assignment
* **Project Visibility:** 100% real-time visibility into project status across all departments
* **Communication Bottlenecks:** 60% reduction in email communication for project coordination
* **Delivery Accuracy:** 95% on-time delivery rate for client milestones

**5.2 User Adoption Metrics**

* **User Adoption Rate:** 90% of team members actively using the system within 3 months
* **System Usage:** Average 6+ hours daily usage per active user
* **User Satisfaction:** Net Promoter Score (NPS) of 70+ from internal users

**5.3 Business Impact Metrics**

* **Project Profitability:** 20% improvement in project margin due to efficiency gains
* **Client Satisfaction:** 15% improvement in client satisfaction scores
* **Scalability:** Ability to handle 200% increase in project volume without additional staff

**6. Implementation Phases**

**Phase 1: Core Foundation (Months 1-4)**

* **Client and user management systems**
* User management and authentication with role-based access
* Project creation and basic workflow
* Task assignment and tracking
* Basic communication tools
* **Initial DaVinci Resolve project file (.drp) import/export**

**Phase 2: Department Specialization (Months 5-8)**

* VFX and Sound Editorial workflows
* **Advanced DaVinci Resolve integration (color grading, Fairlight audio)**
* Restoration processes with DaVinci Resolve noise reduction tools
* Review and approval systems with DaVinci Resolve integration
* File management and versioning
* **DaVinci Resolve Project Server connectivity**

**Phase 3: Advanced Features (Months 9-12)**

* Analytics and reporting with DaVinci Resolve usage metrics
* **Advanced DaVinci Resolve automation via Scripting API**
* Mobile optimization
* Performance optimization
* **Real-time DaVinci Resolve session monitoring**
* **Render queue management and GPU resource allocation**

**Phase 4: Enhancement and Scaling (Months 13-15)**

* AI-powered features for project estimation and optimization
* Advanced automation workflows
* Third-party ecosystem expansion
* Global deployment optimization
* **Advanced DaVinci Resolve collaboration features**
* **HDR and wide gamut workflow optimization**

**7. Conclusion**

This requirements specification provides a comprehensive foundation for developing Disruptor Post's workflow management software. The solution addresses the critical bottleneck of requirement mapping while providing a scalable, secure, and user-friendly platform for managing complex post-production workflows across all creative disciplines.

The phased implementation approach ensures rapid value delivery while building toward a comprehensive solution that can scale with the company's growth and evolving needs.